



Annual Report

of

The Health Department Corporation of Madras

for

The Year 1937

PRINTED BY VICTORIA PRESS

MADRAS

1938





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The Health Department Corporation of Madras

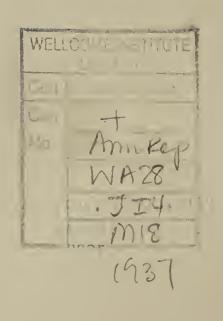
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CONTENTS

,						Page
Introduction	•••	•••	•••	•••	•••	i
Vital Statistics	•••	• • •	•••	•••	•••	1
Vaccination	• • •	• • •	•••	•••	•••	18
Sanitation	• • •	•••	•••	•••		20
Conservancy	•••	•••	• • •		•••	25
Anti-Mosquito Me	asures	,•••	•••		* * *	28
Medical Inspection	n of Scho	ools	•••		• • •	34
Report of the Por	t Health	Officer	•••	•••	• • •	39
Aided Institutions	8	•••	•••	•••	•••	39
Food Analysis	•••	• • •	• • •	•••	·••	40
Water Analysis	•••	•••	•••	* * *	• • •	43
Child Welfare	2 * •	•••	•••	•••		131
				at		
	٠	STATE	MENTS			•
Vital Statistics	•••	•••	•••	•••	•••	46
Vaccination	•••	••	•••	•••	• • •	93
Sanitation	•••	• • •	•••	•••	• • •	97
Dispensaries	• • •	•••	•••	• • •	•••	99
Skin and Leprosy	Clinics	•••	•••	•••	•••	103
Venereal Clinics	• • •	•••	•••	•••	• • •	104
Infectious Disease	es Hospit	als	•••	•••	•••	106
Medical Inspection	n of Scho	ools	•••	•••	•••	111
Food Analysis	•••	•••	•••	•••	•••	123
Water Analysis	•••	•••	***	•••	***	125
Child Welfare	•••	•••	• • •	•••		134
				• •	• • •	TOA

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INTRODUCTION

Commissioner,

Sir,

I submit herewith my report on the Health of Madras during 1937.

The estimated population for 1937 was 7,35,613 as against the census population of 6,48,230 in 1931. The number of live births exceeded the number of deaths by 5,284. This excess of births over deaths was equivalent to 7.2 per thousand of the population and was recorded nine times in succession. A slight reduction is noticed in the number of illegitimate births.

The total number of births 30,958 shows an increase of 1,769 births over the previous year and 1,977 births over the average of the quinquennium, 1932-1936. The birth-rate was 42·1 per thousand of the estimated population. The birth-rate was highest amongst Hindus.

The death-rate shows an increase of 2·1 per thousand of the estimated population. The total number of deaths 25,674 shows an increase of 2,014 as compared to 1936. 4,028 non-residents died in the city as against 2,569 in 1936. Excluding the deaths of non-residents the death-rate of the city for 1937 was 29·4.

The increase in the mortality was due to two circumstances, namely, the larger number of non-residents who died in the city during the year and the unusually high mortality that prevailed during the last quarter of the year owing to the heavy rains which resulted in the flooding of the several low-lying parts of the city. About a fourth of Madras is composed of low-lands occupied by the poor labouring classes. Unless adequate storm-water drainage is effected in these areas, there will be a high toll of human lives during the rainy season. Perambore, Choolai and Washermanpet require storm-water drainage urgently. It is sad to contemplate that what ought to be a season of comfort and low mortality is the reverse in Madras. Why should there be twice the number of deaths in the month of December when compared to that of July? A reference to the statement on page 5 shows that the fourth quarter recorded 1,941 deaths over and above the third quarter. Absence of effective storm-water drainage leads to the flooding of areas, destruction of huts and increase of dampness of flooring. Thousands are rendered homeless and mortality from respiratory and bowel diseases shoots up.

It is not possible to reclaim all the low-lands owing to the heavy expenditure involved. The best remedy lies therefore in effectively draining the low-lands and insisting on high plinths for tenements and huts. The expenditure on storm-water drainage has been totally inadequate and it is necessary that this question should receive greater attention at the hands of the authorities.

The main index of public health is the general death-rate and infant mortality. It is gratifying to note that despite the increase in the general death-rate, the rise in infantile mortality has not been proportionately high. Deaths among infants numbered 6,836 as against 6,318 in 1936. The infantile mortality rate was 220.8 which is the second lowest in the statistical records of the city. The infant mortality rate was highest among Muslims.

The most outstanding feature of the epidemiology of the year was the occurrence of cholera in epidemic form during the last quarter. As noted already, it was the result of the floods and the consequent insanitation of the low-lying areas. Thousands of people were rendered homeless and panic stricken. The dissemination of the disease to the other parts of the city was an easy matter. But for the strenuous efforts of the staff there was every likelihood of a serious epidemic breaking out in the city. The existence of several villages and small towns round about Madras without any drainage and protected water supply has been a serious menace to the health of the city. 238 cases of cholera were brought from outside the city limits to the two Infectious Diseases Hospitals of the city. 46 of them died. It is high time that the Chingleput District Board takes up the question in right earnest and provides one or two isolation hospitals in suitable centres for the treatment of these cases with ambulance service. Unfortunately, epidemics of cholera occur almost simultaneously and it will not be possible to send the Corporation ambulance cars to distant parts when there are calls in the city itself.

When compared to 1936 mortality from small-pox, tuberculosis and respiratory diseases shows slight increase, while mortality from malaria, enteric fever, dysentery, diarrhoea and child-birth shows reduction.

1,155 persons died of tuberculosis as against 1,136 in 1936. Though constant efforts are made by the Corporation to reduce the general mortality by improving sanitation, the prevention of tuberculosis has not received much attention. The city tuberculosis hospital is not adequate to accommodate all the open and advanced cases. Another hospital is urgently required. Hundreds of cases are now kept in dwelling houses without proper isolation. It is these cases that disseminate the disease. In a campaign against tuberculosis nothing is more important than a vigorous and strict control of the construction and reconstruction of dwelling houses. Plans for the construction of tenements on "barrack" and "back to back" patterns are not rare even now. Such constructions should not be permitted.

The report of the School Medical Service reveals on the whole a high incidence of sickness, general debility and mal-nutrition, absence of cleanliness etc. This is obviously due to the low standard of life of parents who are unable to provide their children with the primary needs of a clean and hygienic home life. 2,662 children were afflicted with mal-nutrition. Administration of Cod liver oil enabled only 27 of them to regain normal health. In 1,292 improvement was noticed, while as many as 833 had to continue treatment without progress. Mal-nutrition is a condition brought. about by the lack of balanced diet at home. These children are sure to become a prey to one or more of some of the dangerous diseases owing to the absence of the "resistance" in their system. Mere administration of Cod liver oil will not do in severe cases. Their diet has to be supplemented substantially to obtain better results. A supply of wholesome milk, wholesome bread and jaggery, with Cod liver oil as a tonic, will yield better The "follow-up" work of the Medical Inspectors yielded good 56 children had their carious teeth removed. 490 cases of stomatitis were cured. 127 children had their tonsils removed. 948 children having scabies, eczema etc. were cured. 79 children underwent operation for phimosis.

The leprosy survey of school children was kept up as in the previous year. 509 children were on the leprosy list. Of these 360 were old cases and 149 were from the entrants. In two children the symptom disappeared after treatment. In 32 children there was definite improvement after a prolonged course of treatment. In 428 cases no change was noticed. Owing to the paucity of funds the proposal to appoint a Chief School Medical Inspector was not sanctioned. However, it has to be emphasized that the expansion of work introduced in the School Medical Service in recent years would indicate the urgent necessity for the crea-

tion of such a post. A Chief Medical Inspector will be in a position to co-ordinate and supervise the work of the honorary and paid Medical Inspectors and ensure proper attention to the treatment of children at various hospitals and clinics. Further more, he will be in a position to organise the supply of mid-day meals and introduce more satisfactory diets in advanced cases of mal-nutrition etc.

The work of the Food Inspectors and the Public Analyst shows a progressive increase in the number of samples taken and a decrease in the adulteration of food stuffs. The percentage of adulteration was 22.5 during the year as against 23.9 in 1936. More important than the above is the reduction noticed in the degree of adulteration, especially in ghee. Other articles such as butter, milk, gingelly oil etc., all improved in quality. The construction of a Food Analysis Laboratory was sanctioned and the work was started towards the close of the year. With the addition of an assistant to the Public Analyst and better facilities for analytical work, even greater progress can be expected in coming years.

The expansion of the anti-mosquito measures yielded excellent results. For the first time mosquito nuisance was brought to a minimum during the cold months. Unsewered garden areas received special atten-The periodical visits of our staff have become a familiar feature in these areas and I am very thankful to the citizens for their co-operation in this behalf. With the repetition of the visits a progressive reduction of breeding places was noticed as mentioned in the report on pages 30, 31 and 32. 11,474 breeding places were destroyed by the house inspection staff alone. 25,320 unservicable articles which would have become breeding places for mosquitoes by the collection of rain water in them were removed. Water stored in pots, tubs, drums and cisterns and kept near latrines was a fertile source for the breeding of mosquitoes. A little more care on the part of the citizens can avoid this nuisance causing so much inconvenience to themselves and others. Anti-mosquito work in Thyagarayanagar was augmented by increasing the staff. If the scheme of house inspection is extended to the entire city, there would be a more uniform relief from mosquito nuisance.

Permanent measures included the filling up of 7 ponds and 702 wells. 229 wells were covered with Cuddapah slabs. 656 wells were provided with trap-doors. An intensive programme to fill up low-lands was inaugurated. Several areas were reclaimed notably behind Record Office, Egmore, in Conran Smith Nagar, near Kodambakkam, in Dr. Vijayaragavelu Road, in Perambore Tank, in Appasami Mudaly Street, Junction of Kandapillai Street and Vaidyanatha Mudaly Street, in Venkatanarayana Road, in Greenaway Road and in front of the Slaughter Houses. Further,

several pits and depressions were reclaimed all over the city.

41.307 feet of new sewers were laid during the year as against 36,578 feet in 1936. A vigorous drive to convert the dry latrines into flushout latrines in sewered areas was maintained throughout the year. 4,008 dry latrines were converted into flushout latrines in dwelling houses as against 2,727 in the previous year. Although the out-turn of work for the year has been fair, it should be pointed out that even after the lapse of 10 years during which the scheme has been in progress, about 50% of the houses in the city remain without this essential amenity. Unless every house is fitted up with flushout latrines in south Madras it will not be possible to close the Ice House Road Pail Depot. During the year under report an improved type of public convenience was put up in Gandhi Irwin Road, Egmore. Hundreds of people are using the bathrooms and latrines provided there every day. Proposals were under preparation for similar latrines in Choolai, Moore Market and Peoples Park. There is a great demand for these improved sanitary conveniences in all the slum areas in the city and it is the aim of the department to accomplish it within a reasonable time.

2,197 houses were repaired and rendered fit for human habitation. 415 houses which had no latrines previously were provided with latrines. Flushout latrines were installed in 7 factories. 624 cattle yards were rendered fit for licence after repeated prosecution. Owing to inadequate fines 327 cattle yards remained in the condemned list and they were a source of nuisance and ill-health to the neighbourhood. A scheme for the construction of public cattle yards was placed before the authorities. Owing to the difficulty of land alienation, the scheme sanctioned for putting up dhoby khanas was not taken in hand. A scheme for establishing a venereal clinic at Perambore was sanctioned and the clinic came into existence towards the close of the year.

The sanitation of private markets has been a matter of great concern and difficulty to the department. It was taken up early in the year firstly in connection with the issue of licences. A scheme was prepared to enable the Corporation to municipalise all the private markets in central Madras. The scheme was approved by the Council and it is now awaiting funds. This is a scheme involving huge finance, but it can be asserted at the same time that it is one which is likely to prove a great financial success if wisely managed. From the public health point of view, the benefit to the citizens will be immeasurable and I trust this scheme will be taken up for execution immediately.

As in the previous years a vigorous drive was maintained throughout the year against the sale of noxious food in public streets. Most of the thoroughfares of the city were free from gross abuse. All the private markets were kept in a better condition when compared to 1936 except Kothwal Market, the largest private market in the city. The trustees were interviewed. It was represented that they had a scheme for remodelling and rebuilding the market. Nothing came out of these promises and the market continues in the same condition as it was 10 years ago. What is required here is the widening of passages, building up of gangways, construction of roads, remodelling the latrines and gang-way bazaars. It is hoped that the authorities of the market will carry out the improvements which are long overdue.

The urgent need for a pure, sparkling and abundant supply of water to the city had been emphasized in the last report. Another year has passed without any achievement. Chlorination has become the only important feature of our water works practice. The process of filteration has been relegated to the background. Colonel C. A. H. Harold, Director of Water Examination, Metropolitan Water Board, London, has rightly voiced a warning as regards the place of chlorination in any scheme of water purification. He says: "The aim of application of chlorine should be a corrective to counter an emergency rather than the be-all and end-all of water purification; otherwise there is a definite risk of allowing our filteration, sedimentation and storage barriers to fall into a less important position and to depend upon chlorination entirely." Therefore greater attention has to be paid to the process of filteration to make the city water supply aesthetically satisfactory.

The proposal for the construction of storage tanks for Mylapore and Mandavelli was taken in hand towards the close of the year. The object of these storage tanks is to store water from 9 P. M. to 5 A. M. and supply the same from 5 A. M. to 10 A. M. and 4 P. M. to 6 P. M. At the time of writing the Report, two pairs of storage tanks have been put up and are functioning. The scarcity of water in these areas has been relieved, but more storage tanks in other out-lying areas have soon to be built.

The Royal Swimming Bath at the Peoples' Park has been functioning throughout the year on "the fill and empty" system. The Bath is likely to become more and more popular. Owing to the loss of nearly half a million gallons of water every week the present arrangement cannot be regarded as economical. In its place the system of "continuous circulation and purification of water" should be introduced. The Bath water will be kept in circulation during the period it is in use and will be so chlorinated continuously that a residual chlorine of 2 to 4 p. p.m. will be maintained. This will be more economical and hygienic.

Another wing to the recently constructed Food Laboratory has to be put up early for Water Analysis Section so that a fresh impetus may be given to the co-ordination and expansion of all chemical and biological work done at present at several places. The condition of the present Water Analysis Laboratory is very unsatisfactory and it has to be rebuilt next year.

Some useful work has been done in connection with the improvement of slums in the city during the year. 1,739 new houses came into existence as a result of private enterprise. Proposals were under preparation for improving a few Corporation slums by introducing underground drainage, sanitary conveniences, taps, roads and lights. These schemes have since come into operation. As regards private slums the preliminary step of declaring the areas as cheries under section 257 A has been done. Work connected with the preparation of standard plans for three of the worst cheries has been in progress. A close examination of the provisions of the chapter dealing with cheries and hutting grounds will reveal that the success of the scheme will ultimately depend upon the finances of the Corporation. The procedure is long and tedious and unless a special staff is put on this work, better progress cannot be expected.

In conclusion, I wish to state that the large volume of work noticed in the report would never have been possible but for the courtesy and active interest of the Commissioner and the co-operation of the Councillors. I thank them and also my assistants and staff for their high sense of duty and co-operation.

C. S. GOVINDA PILLAI,
M. B. Ch. B., L. R. C. P. and S., D. P. H., (Edin).

Health Officer.

Forwarded to the Council.

R. SUBBAYYA,

Commissioner.

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SUMMARY OF VITAL STATISTICS FOR 1937

Area		29:396	Sq. miles.
Population (Census, 1931)	• • •	6,47,230	
Population (estimated to middle of	of the		
year, 1937)	• • •	7,35,613	
Average density per acre		39.1	
Inhabited houses (Census, 1931)		73,845	
Births	• • •	30,958	
Birth-rate		42.1	per 1000 esti-
		,	mated population.
Birth-rate (average for the 5 y	ears,		
1932-36)	• • •	41.9	,,
Still births	• • •	1,400	
Deaths		25,674	
Death-rate	• • •	34.9	per 1000 esti-
			mated population.
Death-rate (average for the 5 ye	ears,		
1932-36)	•••	34.4	,,
Natural increase	• • •	5,284	
Rate of natural increase		7.2	per 1000 esti-
			mated population.
Infant mortality rate		220.8	per 1000 live
	. ,		births.
Infant mortality rate (average for	r the		. 4
5 years, 1932-36)	··	233.9	, , , , , , , , , , , , , , , , , , ,
Maternal mortality rate	• • •	9.3	,,
Malana 1 mantalita nota (arranam			
Maternal mortality rate (average	e for		
the 5 years, 1932-36)	e for	10.5	. 27.

DEATHS FROM PRINCIPAL DISEASES

			No.	Rate per 1000 estimated population.
-1,	Cholera	• • •	232	0.32
	Diarrhoea and Dysentery		2,133	2.9
	Small-pox		196	0.27
100. (Measles	; •••	8	0.01
	Malaria	•••	78	0.11
	Enteric Fever	,	96	0.13
	Phthisis		1,104	1.5
**	Respiratory Diseases	• • • •	6,676	9.1
1.7				67

VITAL STATISTICS

Area and Population:—The area of the city is 29:396 square miles. The mid-year population for 1937 worked out by the method of geometrical progression is estimated to be 7,35,613, the 1931 census population being 6,47,230. The estimated population has been used for the calculation of the important rates in the report; whereas the rates in the statistical statements appended to the report have been as usual worked out on the 1931 census population. The population for each of the 40 divisions into which the city is divided as per the Madras City Municipal (Amendment) Act, 1936, not being available, it has not been possible to work out the various divisional rates in the statements.

Meteorology:—A statement showing the atmospheric conditions recorded during 1937 is furnished in the Annual Form A and Table B.

The total rainfall of 61.38 inches recorded during the year is the highest since 1930 which recorded 78.69 inches. An increase of 17.13 inches as compared with the rainfall in the preceding year and an increase of 19.8 inches over the average rainfall for the past 5 years (1932-36) are noticeable.

The highest rainfall was in November (23.81 inches) and the lowest in January (0.07 inch). There was no rainfall in the months of February, March and May.

As usual, the last quarter of the year recorded the highest rainfall (41.06 inches) as against 24.63 inches in the same quarter of 1936. There was rainfall on 100 days during the year.

The weather conditions have a definite influence upon public health. The atmospheric conditions following a severe monsoon usually contribute to the increase of mortality. It was so during the year under report. The abnormal rainfall and the consequent inundation in different parts of the city exerted a baneful influence in increasing the general mortality and the spread of cholera. The people were rendered homeless in the flooded areas. Overcrowded and damp areas thus favoured high mortality. The havoc caused by the flood this year was definitely worse than that of the flood which occurred in 1930.

The graph No. 1 showing the rainfall and its influence on weekly mortality illustrates clearly the rise in the mortality curve soon after the severe and continued rains.

Registration Staff:—Seventeen sub-assistant surgeons attended to the registration of births and deaths in the city during the year.

Births and Deaths:—30,958 live births were registered during the year; thus recording an increase of 1,769 births over the previous year and 1,977 births over the average of the quinquennium (1932-36). The number of births registered during the year stands next to the year 1935 which recorded the highest (31,031 births).

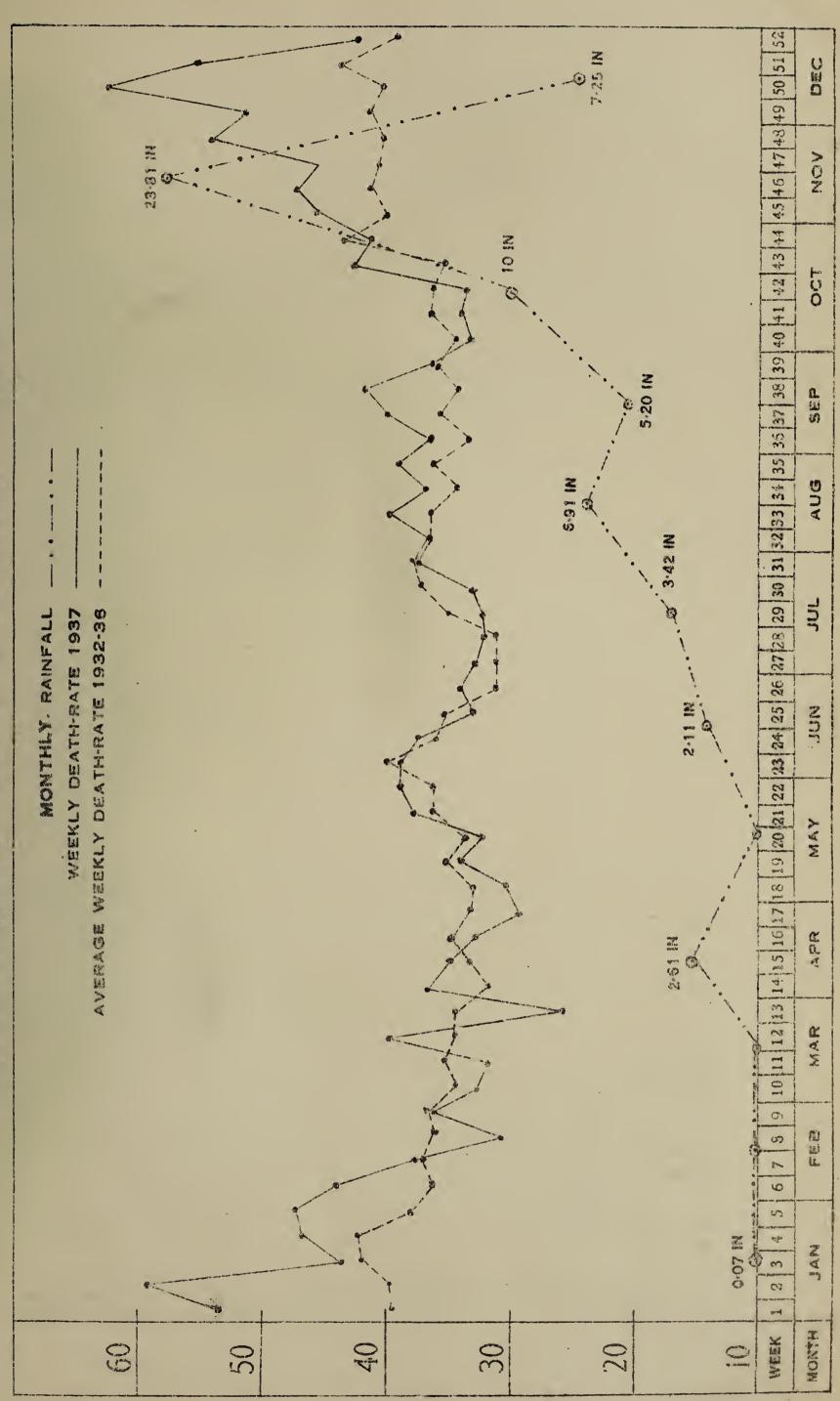
Calculated on the estimated population the birth-rate was 42:1 as compared with 40:5 in 1936, the average rate for the past 5 years (1932-36) being 41:9.

The birth-rate calculated on the census population is given in the Annual Form I appended to the report. It was 47.8 as against 45.1 in 1936, the quinquennial (1932-36) average being 44.8.

Of the total births, 15,931 were males and 15,027 females; thus there were 106 male births for every 100 female births. The excess of male

RAINFALL AND WEEKLY DEATH-RATES IN 1937, AND GRAPH

DURING 1932-36 AVERAGE WEEKLY DEATH-RATES



LITHO BY SOLDEN & CO., MADRAS.



births over female births was recorded in 32 municipal divisions. The births were equal in both sexes in one division and the female births were in excess of the male births in the remaining 7 divisions.

Illegitimate Births:—The number of illegitimate births registered during the year was 210 or 0.7 per-cent of the total births as compared with 256 births or 0.9 per cent in 1936.

Births in Different Quarters of 1937:—The largest number of births was recorded in December (3,332) and the lowest in February (1,865). A comparative statement of births registered in each quarter of 1936 and 1937 and the quarterly average for the quinquennium (1932-36) is furnished below:

Year.	1st. Quarter.	2nd. Quarter.	3rd. Quarter.	4th. Quarter.
1932-36	5,999	7,034	7,857	8,090
1936	5,985	6,747	8.043	8,414
1937	6,247	7,768	8,045	8,898

The first and fourth quarters recorded the lowest and the highest births respectively.

Birth-rates in communities:—The birth-rates recorded among the principal communities during the year are as follows:

Communities.	No. of births registered.	Rate per 1000 estimated population in
		each community.
European	35	8.7
Anglo-Indian	384	32.5
Indian Christian	1.564	34.3
Hindu	25,620	43.6
Mohamedan	3,350	
All communities	30,958	42.1

The birth-rate was highest among the Hindus. The Mohamedans returned the next highest. The Europeans recorded the lowest.

Table C appended to the report gives the number of births and birthrates in the above communities worked out on the census population.

Still-Births:—The number of still-births registered during the year was 1,400 as against 1,415 in 1936. This represented 45.2 per 1,000 live births as compared with 48.5 in the preceding year.

Deaths and Death-rates:—The total number of deaths registered during the year under report numbered 25,674 as compared with 23,660 deaths in 1936, the quinquennial average being 23,813. As previously stated this increase in mortality was the result of the abnormal rainfall and floods experienced during the year and was also due to the prevalence of small-pox and cholera. These adverse conditions prevailed in the districts of the Presidency adjoining the city as well and were responsible for the rise in mortality during the year. The constant influx of people into this metropolitan city from within and without the Presidency makes it always vulnerable to infectious diseases.

Of the total deaths, 21,646 deaths were those of residents and 4,028 deaths were those of non-residents (including destitutes and homeless) chiefly occurring in public institutions, hospitals etc.

Calculated on the estimated population, the annual death-rate was 34.9 as against 32.8 in the preceding year, the quinquennial average being 34.4.

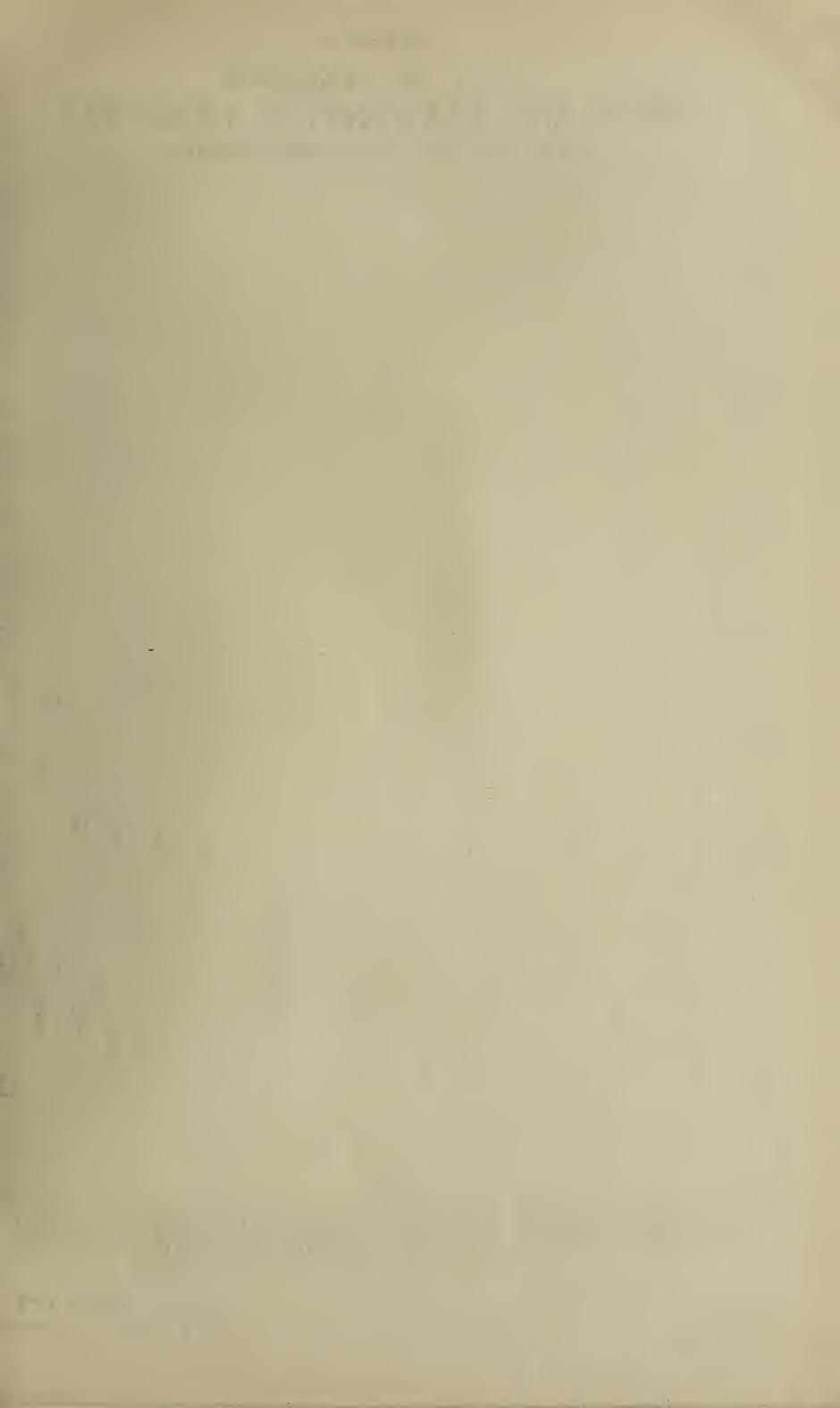
The annual death-rate calculated on the census population was 39.7 as compared with 36.6 in 1936, the average for the quinquennium (1932-36) being 36.3.

An excess of 5,284 births over deaths was recorded during the year as compared with 5,529 in 1936. The rate of "Natural Increase" worked out to 7.2 per mille of estimated population as against 7.7 in the previous vear.

A statement of births and deaths recorded in the city from 1900 to 1937 is furnished below with special reference to the natural increase. It will be observed that the natural increase is being continuously recorded since 1929.

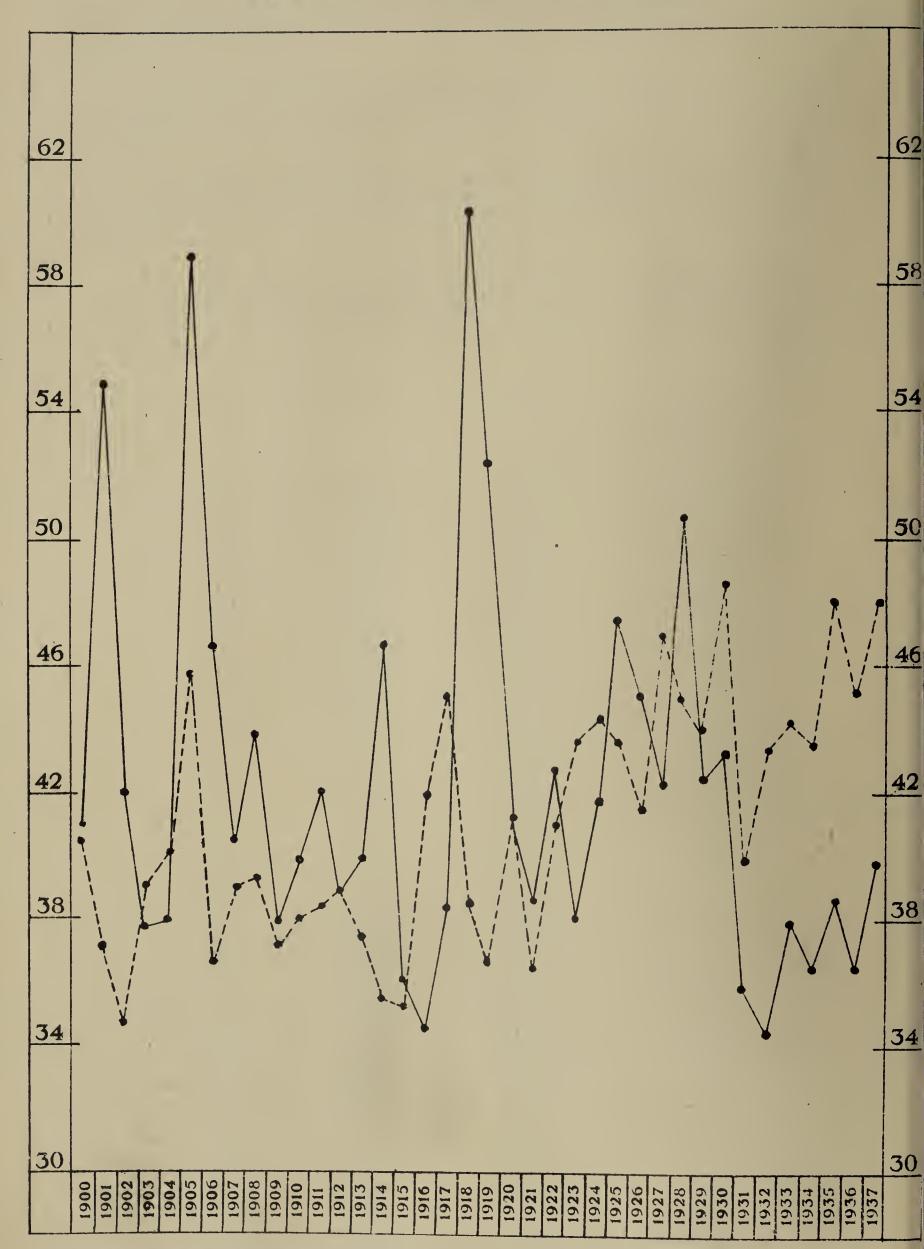
Year.	Births.	Deaths.	Natural
i car.	2512 01100	D oct office.	increase or
			decrease.
1000	20 1:72	00.00	
1900	20,672	20,937	-265
1901	18,872	28,031	-9159
1902	17,743	21,395	-3652
1903	19,830	19,205	+625
1904	20,439	19.305	+1134
1905	23,263	30,060	6797
1906	18,608	23,749	—5 <u>1</u> 4 <u>1</u>
1907	19,808	20,638	830
1908 1909	19,980	22,285	-2305
	18,981	19,354	-373
1910 1911	19,340	20,312	-972
1912	19,735	21,771	-2036
1913	20,099	20,132	—33 1905
1914	19,470	20,675	-12.05
1915	$18,\!241$ $18,\!331$	24,174	-5933
1916	21,675	18,688	-357
1917	23,296	17,872	+ 3803
1918	19,897	19,917	+3379
1919	18,936	31,262	-11365
1920	21,396	27,187	-8251
1921	19,187	$21,418 \\ 20,268$	22
1922	21,650	22,475	-1081
1923	22,975	19,933	—825 L 2049
1924	23,275	21,960	+3042
1925	23,070	25,000	+1315
1926	22,000	23,776	-1930
1927	24,760	22,364	-1776
1928	23,729	26,715	+2396 -2986
1929	23,124	22,415	+709
1930	25,662	22.839	+2823
1931	25,738	23.162	+2576
1932	27,996	22,290	+5706
1933	28,533	24,500	+4033
1 934	28,149	23,659	+4490
1935	31,031	24,955	+6076
1936	29,189	23,660	+5529
1937	30,958	25,674	+5284

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GRAPH II CITY OF MADRAS BIRTH AND DEATH-RATES 1900-1937

RATE PER 1,000 POPULATION (CENSUS)



- BIRTH RATE

LITHO BY SOLDEN 4 CO. MADRA

Graph No. II illustrates the birth and death rates from 1900 to 1937.

During the year under report, 32 municipal divisions recorded natural increase, i. e. excess of births over deaths.

Deaths in different Quarters of 1937:—The highest number of deaths was registered in December (3,320) and the lowest in April (1,759). The following statement furnishes the number of deaths registered in the different quarters of 1936 and 1937 and the quarterly average for the quinquennium (1932–1936).

Year.	1st. Quarter.	2nd. Quarter.	3rd. Quarter.	4th. Quarter.
1932–36	5,860	5,546	5,729	6,678
1936	5,583	5,517	5,814	6,746
1937	6,054	5,587	6,046	7,987

Death-rates in communities:—The principal communities recorded the following death-rates during the year:

Community.		Deaths.	Rate per 1000 estimated population in each community
European	•••	18	4.5
Anglo-Indian		253	21.4
Indian Christian		1,124	24.6
Hindu		21,265	36.2
Mohamedan		3,011	36.3
Others		3	0.8
All Communities	-	25,674	34.9

Table C gives the statement of deaths and death-rates in the communities calculated on the census population.

Age and Sex distribution of Deaths:—Of the total deaths registered during the year, 13,281 were among males and 12,393 among females; As usual, male deaths predominated over female deaths—107 deaths among males for every 100 deaths among females as compared with 105 male deaths for every 100 female deaths in 1936. This was noticed in 27 municipal divisions. In one division, the deaths were equal in both the sexes. In the remaining 12 divisions, the female deaths exceeded the male deaths.

The specific death-rates among males and females during the year were 34·1 and 35·8 per mille of the estimated population respectively.

The statement furnished below gives the number of deaths at the various age-periods, the death-rate per 1000 of the estimated population and the percentage to the total number of deaths in each age-period:

Age-period.	No. of Deaths.	Rate per 1000 estimated population.	Percentage to total deaths.
Under 1 year	6,836	220.8*	26.6
1- 5 years	4,611	62.2	18.0
5- 10 years	979	12.6	3.8
10-15 years	474	6.3	1.8
15-20 years	630	8.0	2.5
20-30 years	2,133	13.5	8.3
30-40 years	1,869	15.8	7:3

Age-period.		No. of Deaths.	Rate per 1000 estimated population.	Percentage to total deaths.
40–50 years 50–60 years 60 and above	• • •	$\begin{array}{c} 1,700 \\ 1,801 \\ 4,641 \end{array}$	24·2 50·1 235·6	6·6 7·0 18·1
		25,674	34.9	100:0

^{*}Calculated on 1000 live births registered during the year.

Annual Form No. IV furnishes the death-rates in different ageperiods calculated on the census population.

Infantile Mortality:— During the year under report, the deaths of 6,836 infants under one year of age were registered. Of these, 4,722 deaths occurred among infants born in the city and 2,114 deaths among infants born in the moffusil.

The infantile death-rate during the year was 220.8 as compared with 216.5 in the preceding year. The rate recorded in 1936 is the lowest. The rate during the year under report is the second lowest in the vital statistical records. The average rate for the past 5 years (1932–36) was 233.9.

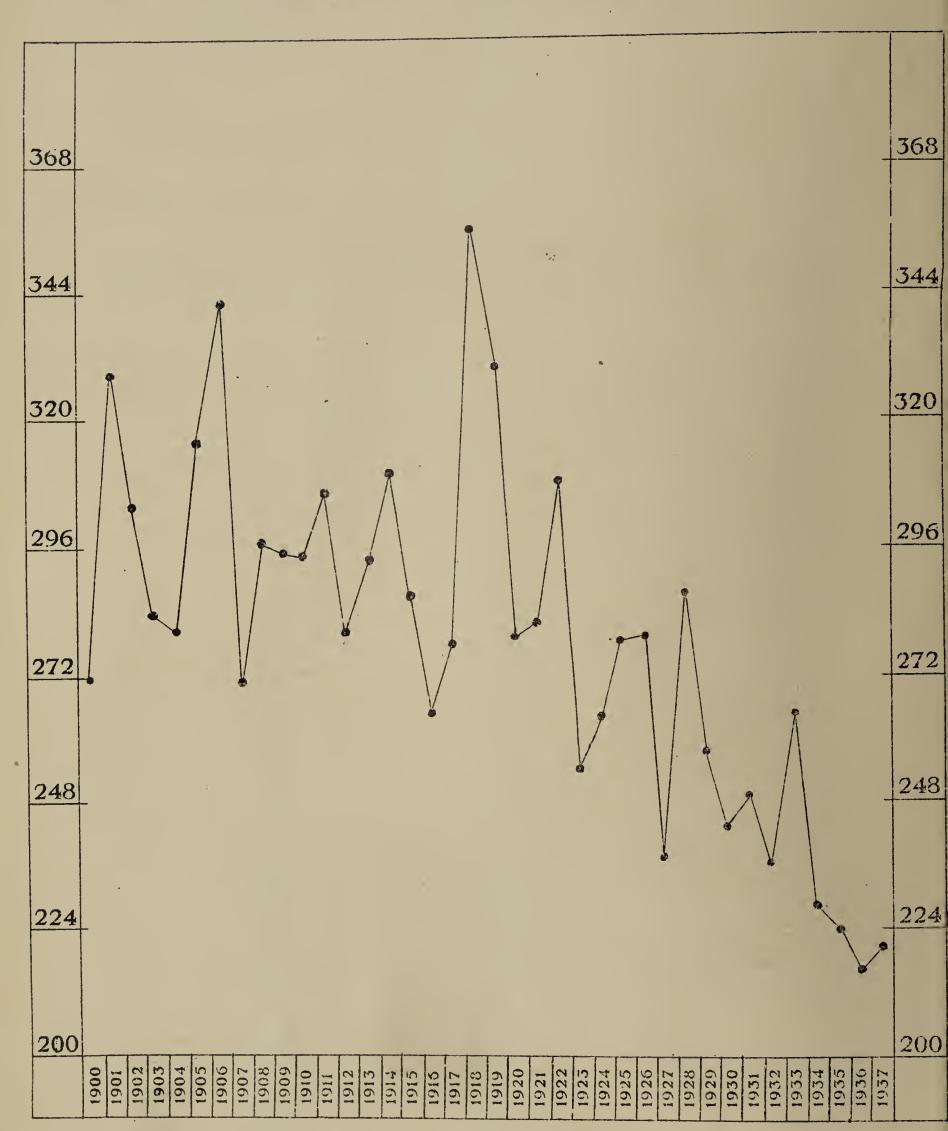
Excluding the deaths of infants born outside the city, the infantile death-rate would be 152.5.

The infantile mortality rates recorded in the city from 1900 to 1937 are as follows:

Year.	Rate per 1000 births.	Average for 10 years.
1900	272.0	
1901	328:3	
1902	303.9	
1903	283:3	
1904	280.9	298.8
1905	316.3	
1906	341.2	
1907	$270.\overline{7}$	
1908	296:3	
1909	295.0	
1910	294.1	
1911	305.4	
1912	280.4	
1913	293.4	
1914	308.9	299.5
1915	286.1	
1916	265.1	
1917	$277 \cdot \overline{3}$	
1918	355.2	
 1919	329.0	1
1920	279.3	
1921	281.9	
1922	308.0	
1923	254.0	
1924	264.1	272· 6
	VO 1 1	2120

GRAPH III CITY OF MADRAS INFANTILE MORTALITY RATES 1900-1937

(RATE PER 1,000 LIVE BIRTHS)



LITHO BY SOLDEN & CO., MADRAS.

Year.	Rate per 1000 births.	Average for 10 years.
$1925 \\ 1926 \\ 1927 \\ 1928 \\ 1929$	2 ⁷ 8·8 279·3 237·6 286·8 256·6	
1930 1931 1932 1933 1934 1935 1936 1937	243·9 248·3 236·5 264·3 228·2 223·9 216·5 220·8	

Graph No. III illustrates the infantile death-rates from 1900 to 1937.

Age and Causes of infant deaths:—The following statement furnishes the principal causes of infant deaths under different age-periods:

Age-periods.	Small-pox.	Measles.	Malaria.	Other fevers.	Diarrhoea and Dysentery.	Premature birth.	Debility.	Nervous system (Infantile convulsions)	Respiratory diseases.	Other causes.	Total.	Percentage of deaths to total infant deaths.
Under 7 days		•••		7	16	1,219	12	58	15	157	1,484	21.7
7 days and under one month.				16	32	681	12	54	63	163	1,021	14.9
1 month and under 4 months.			1	70	105	252	37	184	440	291	1,384	20.2
4 months and under 7 months.				70	139	9	27	132	583	191	1,158	16.9
7 months and under 10 months.	1	2	2	6 6	125		3	89	586	174 '	1,051	15.5
10 months and under one year.				58	88		4	51	313	224	738	10.8
Total	15	2	3	287	505	2,161	95	568	2,000	1,200	6,836	100.0
										_		

Infantile Deaths by Months:—Table E in the appendix gives in detail the number of infant deaths and infantile mortality rates according to months as compared with 1936. The highest mortality rate was recorded in January (282.6) and the lowest in April (171.3).

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Infantile mortality-rates in divisions:—The number of births and the number of infant deaths registered in the 40 municipal divisions with the infantile mortality rates per 1000 births during the year are given in the following statement:

O			
Municipal	No. of births	No. of in-	Infantile
divisions.	registered.	fant deaths.	mortality rates
al vibioliz.	208230000		per 1000 births
1	579	155	267.7
$egin{array}{c} 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 7 \\ 8 \\ 9 \\ \end{array}$	616	126	204.6
<i>↓</i> 2	1.465	$\frac{120}{297}$	202.7
) 1	1,316	306	232.6
년 변		303	240.1
ე <i>ც</i>	$1,262 \\ 381$	98	257:2
7	774	145	187.4
1		52	166.1
ð	306 666		
		134	201.2
10	379	106	279.7
11	746	156	209.1
12	293	69 26 2	235.5
13	1,083	267	246.5
$\frac{14}{12}$	759	217	286.0
15	326 400	91	279.1
16	406	126	310.3
17	1,272	306	240.5
18	958	232	242.2
19	1,414	355	251.1
20	838	187	223.1
21	832	163	195.9
22	550	86	156.3
23	881	208	236.1
24	550	108	196.3
25	851	185	217.4
26	914	194	212.2
27	876	148	169.0
28	621	117	188 4
29	433	103	237.9
30	826	. 173	209.4
31	998	205	205.4
32	962	173	179.8
33	645	138	213.9
34	735	165	224.5
35	1,678	373	222:3
36	701	141.	201.1
37	766	174	227.2
38	464	73	157.3
39	503	100	198.8
40	333	81	243:3
	30,958	6,836	220.0
		0,000	220.8

20 municipal divisions returned rates above the annual infantile mortality rate for the whole city. High death-rates occurred in divisions which are congested and which contain poorer classes. Ignorance, poverty and economic distress of the parents account for the high mortality among the infants.

Infantile mortality rates in communities:—The infantile mortality rates in the principal communities during 1937 are as follows:

Community.	Births registered.	Infantile deaths.	Rate per 1000 births in each community.
European	35	2	57.1
Anglo-Indian	384	46	119.8
Indian Christian	1,564	304	194.4
Hindu	25,620	5,659	220.9
Mohamedan	3,350	818	244.2

The births, infant deaths and infantile mortality rates in the principal sub-castes of the Hindu community for 1937 are set forth in the table below:

Caste.		Births in each caste.	Infant deaths in each caste.	Rate per 1000 births in each caste.
Brahmin	• • •	2,126	352	165.6
Chetty	• • •	1,814	433	238.7
Vellala or Mudaliar	• • •	4,122	7 95	192.9
Balijah or Naidu	• • •	2,522	629	249.5
Vannia or Naicker	• • •	4,033	968	240.1
Adi-dravida	•••	3,910	1,003	256.4
Patnavar	•••	342	106	309.9
Yadhava or Edayar	•••	852	217	254.8
Viswakarma Brahr	nin			
or Kammalar	•••	· 7 90	168	212.7
Others	•••	5,109	988	193.4
		25,620	5,659	220.9
			and management and an	

Principal Causes of Deaths:—The following table gives the number of deaths from various causes together with the death-rates per 1000 of the estimated population and the percentage to the total number of deaths registered during the year.

Causes of deaths.		No. of deaths registered.	Rate per 1000 estimated population.	Percentage to total deaths.
Cholera		232	0.35	0.90
Dysentery & Diarrhoea		2,133	2.9	8.31
Small-pox	•••	196	0.27	0.76
Measles		8	0.01	0.03
Malaria	•••	78	0.11	0.30
Enteric fever	•••	96	0.13	0.38
Other fevers	•••	2,036	2. 8	7.93
General respiratory		•	,	
diseases	•••	6,676	9.1	26.00
Tuberculosis		1,155	1.6	4 :50
Deaths from childbirth	•••	289	0:39	1.13
All other causes includi	ng			•
deaths from injuries	•••	12,775	17.4	49.76
*		25,674	34.9	100.00
		The state of the s		

Cholera:—795 attacks and 232 deaths from cholera occurred during the year as against 395 attacks and 140 deaths in the preceding year. The annual death-rate calculated on the estimated population was 0.32 as compared with 0.19 in 1936, the average for the quinquennium (1932–36) being 0.15.

The death-rate calculated on the census population was 0.36 as compared with 0.22 in the preceding year, the quinquennial average being 0.17.

The statistics of deaths from cholera from 1918 to 1937 are given below:

Year.	Deaths.	Year.	Deaths.
1918	503	1928	708
1919	642	1929	16
1920	22	1930	43
1921	139	1931	153
1922	17	1932	5
1923	21	1933	62
1924	97	1934	166
1925	203	1935	145
1926	98	1936	140
1927	512	1937	232

Graph IV illustrates the mortality from cholera from 1918 to 1937. The distribution of attacks and deaths in each of the quarters of 1937 are as follows:

Quarters.		Attacks.	Deaths.
1st. quarter 2nd. quarter	• • •	89 9	$\frac{47}{4}$
3rd. quarter 4th. quarter		$\begin{array}{c} 164 \\ 533 \end{array}$	54 127
· +un, quarter	c 9°°°	795	232
<u> </u>			

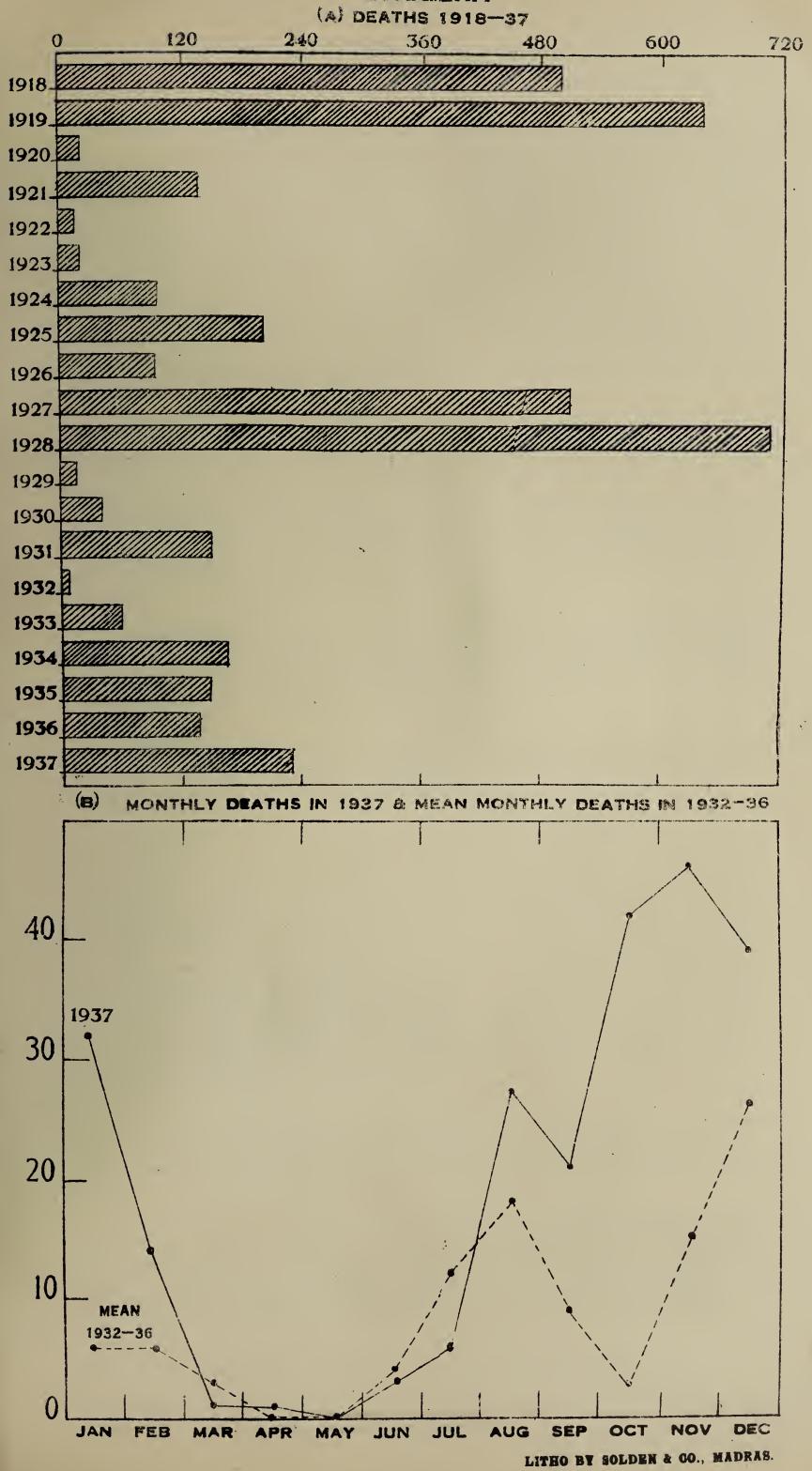
A comparative statement of the incidence of cholera in the city during each quarter of 1936 and 1937 and the quarterly average for the quinquennium (1932–1936) is furnished below:

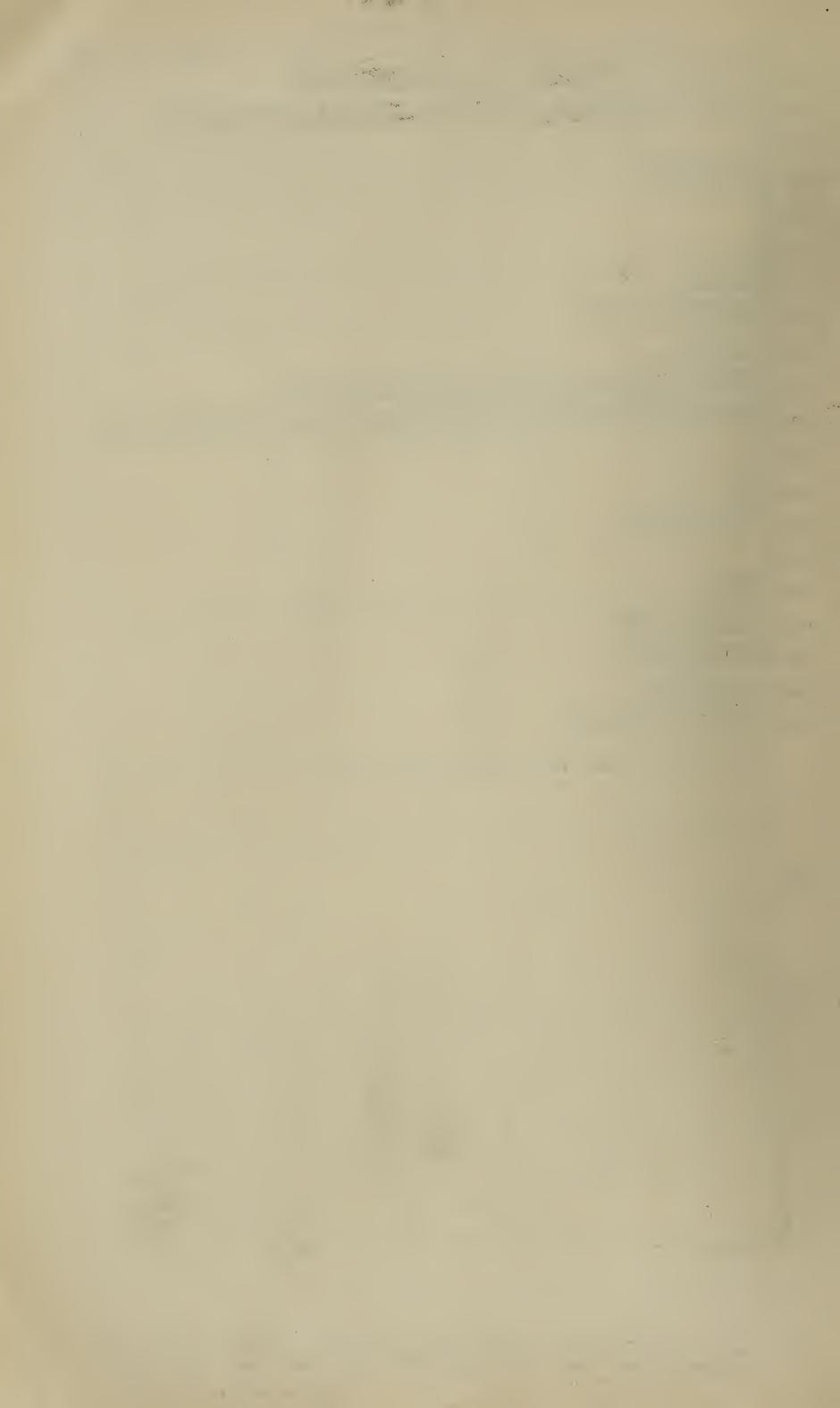
	1st. quarter.	2nd. quarter.	3rd. quarter.	4th. quarter.
1932–36	. 36	10	97	106
1936	. 103	7	14	271
1937	. 89 *	9	164	533

It will be seen from the above statement that the incidence is lowest during the second quarter. The infection begins to spread and accounts for larger number of cases during the third quarter. The Periapalayam festival in Chingleput district which is held every year during July attracts thousands of people from the adjoining districts including the city and gives annually a cause for alarm. Invariably, the epidemic breaks out following this festival in the adjoining districts and Madras, being very adjacent, cannot but share the chances of the infection. It is during the last quarter of every year that the largest number of cases often occurs. The atmospheric conditions following the monsoons probably account for the intensity and the spread of the infection which continues to give rise to the incidence of the disease in the following year also.

The seasonal occurrence of cholera in the city is shown in Graph IV (B).

GRAPH IV CHOLERA





The disease which was prevalent in 1936 continued to prevail during the year under report and accounted for 89 cases during the first quarter. Though it showed signs of abatement during the second quarter, it reappeared due to the usual effects of the seasonal influence and accounted for 164 cases during the third quarter. The infection became more severe and wide spread during the last quarter and there were as many as 533 cases during this quarter. The highest number of attacks and deaths occurred in November (265 attacks and 46 deaths) and this severe rise in the incidence of cholera was due to the unusual rains, floods and the consequent insanitation of the affected areas. Thousands of people were rendered homeless and panic stricken. The dissemination of the infection to the other parts of the city occurred very easily. The disease was severe in December also (168 attacks and 39 deaths).

During the year all the municipal divisions returned cases of cholera except the 29th. division. The highest incidence took place in the 4th. municipal division (87 attacks), followed by the 1st. municipal division (66 attacks), 5th. municipal division (52 attacks), 3rd. municipal division (45 attacks), 19th. municipal division (44 attacks), 18th. municipal division (35 attacks), and 35th. municipal division (31 attacks). A large number of cases in these divisions as well as in other divisions occurred soon after the floods specially among the homeless and those stranded as a result of the floods.

The disease was raging in the adjoining districts as well before and after the floods and as many as 238 cases from the surrounding infected areas were admitted into the Infectious Diseases Hospitals for treatment. Among these 238 cases, death occurred in 46 cases.

The Annual Form VI gives the number of deaths in the various divisions during the year. Deaths occurred in all the municipal divisions excepting in 26th. 29th. and 38th. divisions.

Preventive measures were promptly carried out by the sanitary and medical staff of the department. Isolation, disinfection and inoculation were strictly enforced. As many as 41,031 persons were inoculated with anti-cholera vaccine. The hospital staff was suitably augmented to meet the requirements. The city water supply was carefully watched and found to be safe. The incidence of the disease in the city and the methods of its prevention were made known to the public through the Corporation Broadcasting Station and press communiques. Pamphlets were distributed. The medical practitioners in the city were requested by a circular letter to co-operate with the department and avail themselves of the free supply of anti-cholera vaccine from the Corporation Vaccine Depot. The sale of noxious food was prevented. Special attention was paid to the conservancy of the affected localities.

The two ambulance cars attached to the Corporation Isolation Hospitals were utilised for the prompt removal of patients free of charge. The number of cases treated and the results of treatment are given in the statements of the Infectious Diseases Hospitals.

Diarrhoea and Dysentery:—Diarrhoea and dysentery accounted for 2,133 deaths with a death-rate of 2.9 per mille of the estimated population as compared with 3.1 in 1936, the average of the quinquennium (1932–36) being 3.4. Calculated on the census population, the annual death-rate was 3.3 as against 3.4 in 1936, the average rate for the past 5 years being 3.6.

The mortality from diarrhoea and dysentery from 1928 to 1937 is given below:

Year.	Deaths.	Year.	Deaths.
1928	3,931	1933	2,670
1929	3,127	1934	2,008
1930	3,056	1935	2,320
1931	2,746	1936	2,208
1932	2,644	1937	2,133

The occurrence of deaths in the different quarters of the year was as follows:

Quarters.	Deaths
1st. Quarter.	550
2nd. Quarter.	462
3rd. Quarter.	514
4th. Quarter.	607
	0.100
	2,133

The Annual Form No. XIII furnishes the deaths in the various divisions.

Small-pox:-During the year 756 attacks and 196 deaths were reported from small-pox as against 37 attacks and 3 deaths in the previous year, 1936. The disease was prevalent in the districts of this Presidency as well as in Bombay. The annual death-rate was 0.27 per mille of the estimated population as compared with 0.004 in 1936. The quinquennial average (1932–36) was 0.36. Calculated on the census population, the annual death-rate was 0.3 in 1937 and 0.005 in 1936, the rate for the past 5 years being 0.38

The incidence of small-pox during the past 20 years (1918-1937) is furnished below:

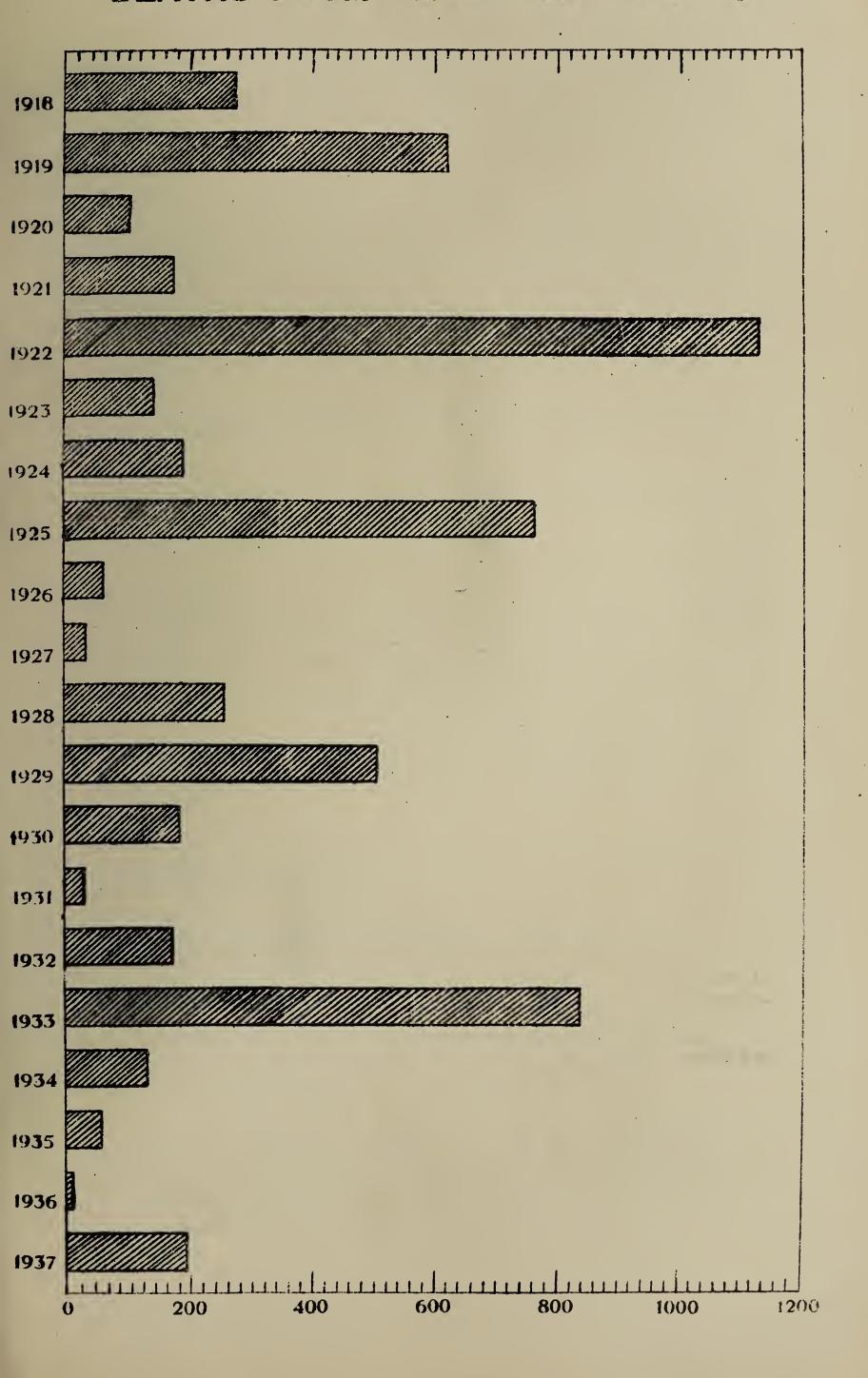
Year.	Attacks.	Deaths.	Year.	Attacks.	Deaths.
1918	677	272	1928	1,066	251
1919	1,227	611	1929	2,019	506
1920	315	109	1930	877	188
1921	569	180	1931	109	24
1922	2,727	1,121	1932	842	176
1923	481	151	1933	3,503	$\overline{837}$
1924	665	197	1934	638	13I
1925	1,807	763	1935	295	59
1926	300	60	1936	37	3
1927	385	32	1937	756	196

The mortality statistics from small-pox in the city during the past 20 years is illustrated in Diagram No. V. It will be seen that there is a seasonal prevalence of the disease in the city once in 3 to 4 years.

The incidence in the several quarters of the year under report was as follows:

Quarters:		Attacks.		Deaths.
1st. Quarter 2nd. Quarter 3rd. Quarter 4th. Quarter	•••	73 125 297 261		19 43 73 61
	,	756	,	196

DEATHS FROM SMALLPOX 1918-37.



Cases were reported during all the months of the year. The highest number of attacks and deaths was reported in December (142 attacks and 32 deaths). The next in severity was in August (139 attacks and 31 deaths), and then in July (85 attacks and 21 deaths), in September (73 attacks and 21 deaths), in October (66 attacks and 19 deaths) and in November (53 attacks and 10 deaths). The incidence was the lowest in January (6 attacks and 3 deaths).

All the municipal divisions were affected. 35th division reported the largest number of attacks (101 attacks and 32 deaths) followed by the 14th division (59 attacks and 15 deaths), 13th division (39 attacks and 10 deaths), 15th division (39 attacks and 15 deaths), 10th division (39 attacks and 8 deaths), 16th division (37 attacks and 7 deaths) and 12th division (35 attacks and 9 deaths). The lowest number of attacks was reported from the 28th division (1 attack and no death). Deaths occurred only in 35 municipal divisions.

The disease was raging in the adjoining districts and as many as 40 cases were admitted into the Infectious Diseases Hospitals for treatment. Death occurred in 7 cases.

Annual Form No. VII gives the number of deaths in the various divisions during the year.

The patients were promptly removed to the hospitals and the infected houses were disinfected immediately by the sanitary staff. House to house inspections were made to detect hidden cases. The medical staff pushed on vaccination and re-vaccination among the contacts by house to house visits. The medical practitioners were requested to notify all cases coming to their notice. A press communique was issued and a message on the prevention of small-pox and the need for notification and re-vaccination was sent to the public through the Corporation Broadcasting Station. Pamphlets were also distributed. The heads of public institutions, colleges and schools were informed to get their staff and pupils re-vaccinated. Additional staff was appointed for the Infectious Diseases Hospitals to cope with the increased work. The infected areas were specially conserved and kept clean.

Vaccination and re-vaccination perfomed during the year are given in a separate report elsewhere.

The number of small-pox cases isolated and treated during the year is given in the statements of the Infectious Diseases Hospitals.

Measles:—8 deaths from measles were registered during the year as against 5 in 1936. The annual death-rate was 0.01 per mille of estimated population as compared with 0.007 in 1936. Only 6 municipal divisions reported deaths from this disease. (Annual Form No. VIII.)

Malaria:—78 deaths from malaria were registered as against 113 in the previous year. The annual death-rate was 0·11 per mille of estimated population as against 0·16 in 1936, the average for the quinquennium being 0·24. Calculated on the census population, the death-rate was 0·12 in 1937 and 0·18 in 1936, the quinquennial rate being 0·24.

The mortality from malaria for the past 10 years (1928-37) is furnished below:

Year.	Deaths.	Year.	Deaths.
1928	1,599	1933	140
1929	681	1934	1 93
1930	283	1.935	167
1931	277	193 6	113
1932	165	1937	78

The number of deaths during the year is the lowest.

The distribution of deaths during the quarters of the year was as follows:

Quarters.	Deaths.
1st.	21
2nd.	19
3rd.	18
4th.	20
	78

Annual Form No. X gives the number of deaths registered in each municipal division.

Anti-malarial measures were carried out as usual by a special staff. A report of work done by the staff is given separately.

Enteric Fever:—The occurrence of 274 cases of enteric fever was notified during the year as against 423 cases in the preceding year, 1936. Of these, 96 died with an annual death-rate of 0.13 per mille of estimated population as against 0.23 in 1936, the quinquennial (1932-36) average being 0.2. Calculated on the census population, the death-rate was 0.15 in 1937 and 0.25 in 1936, the average for the previous five years being 0.21.

The mortality from enteric fever for the past 10 years is given below:

Year.	Deaths.	Year.	Deaths.
1928	177	1933	90
1929	130	1934	145
1930	126	1935	186
1931	166	1936	163
1932	101 ,	1937	96

With the exception of the year, 1933, the number of deaths during the year stands lowest. Cases occurred throughout the year. The highest number of attacks was reported in October (34 attacks) followed by September (32 attacks) and August (30 attacks). The lowest incidence was reported in April (8 attacks).

The distribution of the 274 cases during the year was as follows:

Quarters. 1st. 2nd. 3rd. 4th.	Attacks. 53 51 89 81	Deaths. 21 23 33 19
y==.	274	96

With the exception of the 6th. municipal division, cases were reported from all the other divisions. 23rd. and 32nd. municipal divisions reported the largest number of cases (19). Among the 39 municipal divisions which reported the incidence, no death occurred in the 10th. 16th. 21st. 22nd. 34th. 36th. 37th. and 40th. divisions. (Annual Form No. XI.)

Prompt preventive measures were vigorously carried out in all the infected houses and 1,849 contacts were inoculated with anti-typhoid vaccine as a prophylactic measure.

Other Fevers:—2,036 deaths were registered as against 1,799 in the preceding year, the annual death-rate being 2.8 and 2.5 per mille of estimated population respectively. The average for the past 5 years (1932-36) was 2.9. Calculated on the census population, the death-rate was 3.1 in 1937 and 2.8 in 1936, the quinquennial average being 3.1.

The number of deaths registered in each municipal division is given in the Annual Form No. XII.

General Respiratory Diseases:—6,676 deaths were registered under this group as compared with 6,410 in 1936. The annual death-rate was 9.1 per mille of estimated population as against 8.9 in the previous year, the quinquennial (1932-36) average being 8.7. Calculated on the census population, the death-rate was 10.3 in 1937 and 9.9 in 1936, the rate for the past 5 years being 9.2.

The distribution of mortality during the year was as follows:

Quarters.	Deaths.
1st. 2nd. 3rd. 4th.	1,721 $1,529$ $1,496$ $1,930$
	6,676

The number of deaths registered in each division is given in the Annual Form No. XV.

Tuberculosis:—1,155 deaths were registered from tuberculosis during the year as compared with 1,136 deaths in 1936. Calculated on the estimated population, the annual death-rate was 1.6 being the same as in the previous year. The average of the quinquennium (1932-36) was also 1.6. Calculated on the census population, the death-rate was 1.8 in 1937 and the rates for 1936 and for the quinquennium (1932-36) were 1.7 and 1.6 respectively.

The number of deaths due to tuberculosis of lungs was 1,104 or 1.5 per mille of estimated population as against 1,010 or 1.4 in 1936.

The mortality from tuberculosis from 1928 to 1937 is furnished below:

Year.	Deaths.	Year.	Deaths.
1928	1,812	1933	1,011
1929	1,371	1934	1,122
1930	1,075	1935	1,209
1931	1,020	1936	1,136
1932	917	1937	1,155

The following is the number of deaths registered in each quarter of the year:

Quarters.	Deaths.
1st. 2nd. 3rd. 4th.	$267 \\ 245 \\ 282 \\ 361$
	1,155

The number of deaths registered in the various divisions is given in the Annual Form No. XIV.

The sanitary and medical staff disinfected the infected houses and explained to the contacts and relatives the necessity for early notification and early treatment and the value of fresh air and food in preventing this disease.

All the cases that were notified by the hospitals and medical practitioners were visited from time to time and kept under observation. The patients were also instructed about the methods of prevention, isolation, disinfection of sputum and its disposal, value of fresh air, fresh and nutritious food, personal cleanliness, treatment, rest, etc. Pamphlets on tuberculosis were freely distributed to them.

The problem relating to the prevention of tuberculosis is purely a social problem as it is more a disease of the poor than of the well-to-do classes. It gains a strong foot-hold only where poor food, bad housing, over-crowding, over-work and worry exist. If any great reduction in the incidence of this disease is to be effected, the social and economic conditions of the masses have to be improved.

Deaths from Child-birth:—289 women died from causes connected with child-bearing as compared with 294 in 1936. The maternal mortality rate was 9.3 per 1000 live births as compared with 10.1 in the preceding year. The average for the quinquennium (1932-36) was 10.5.

The maternal mortality rates from 1928 to 1937 are furnished below:

1928 15.4	
1929 13.1	
1930 $12.\overline{7}$	
1931 11.6	
1932 10.0	
1933 11.6	
1934 $1 \cdot 1$	
1935 9.5	
1936	
1937 9.3	

A considerable improvement is noticed during the year compared with the other years under reference and the rate during this year is the lowest.

The maternal deaths registered during the year are classified below according to age and cause of death.

						1	
	De	eaths in	age-pe	Total	Percentage		
Cause of death.	15-20 Years.		$\begin{array}{c} 30\text{-}40 \\ \text{Years.} \end{array}$	40 and above.	deaths.	to total deaths.	
Puerperal sepsis	32	71	37	3	143	49.5	
Abortion	5	11	5		21	7.3	
Other accidents and diseases of pregnancy	1	66	31	1	125	43.2	
Total	64	148	73	4	289	100.0	

Puerperal sepsis accounted for 143 deaths or 49.5% of the total deaths. Calculated with reference to the births registered during the year, the death-rate from puerperal sepsis was 4.6 per 1000 births as compared with 6.4 in 1936.

Annual Form No. XVII gives the maternal deaths and death-rates in the various divisions. High rates are noticed in the divisions which contain a large percentage of poor classes.

The statistics relating to the deaths of mothers who came under the care of the various clinics of the Corporation Child Welfare Scheme are given in a separate report of the Superintendent, Child Welfare Scheme.

Deaths from other causes:—12,605 deaths were registered under this group as against 11,157 in 1936. Under this group are included deaths due to the diseases of the circulatory, digestive, nervous, genito-urinary and other systems except respiratory system. The annual death-rate was 17·1 per mille of estimated population as against 15·5 in 1936 and 16·1 which is the quinquennial (1932-36) average. Calculated on the census population, the death-rate was 19·5, the rates for 1936 and for the quinquennium (1932-36) being 17·2 and 17·0 respectively (Annual Form No. XVIII).

Certified Deaths:—4,679 deaths were certified by the various hospitals in the city and 1,704 deaths by the private medical practitioners as to the causes of death. The certified deaths represent 24.9 per cent of the total deaths as compared with 22.4 per cent in 1936. This increase indicates the amount of response on the part of the hospitals and medical practitioners in reporting to the Health Department the causes of the death of persons who came under their treatment. The Medical Registrars of-Births and Deaths verified the causes of the other deaths.

Burial and Burning Grounds:—The divisional Sanitary Inspectors supervised the burial and burning grounds in the city. Out of 25,674 deaths 7,795 corpses were burnt and 17,879 corpses buried.

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VACCINATION

Staff:--17 Sub-assistant surgeons were in charge of the vaccination work assisted by 38 Vaccinators including 2 women Vaccinators. The female Vaccinators worked in the Mohamedan localities.

Operations: --80,250 vaccinations were performed during the year as against 43,179 in 1936; an increase of 37,071 was thereby recorded.

The statement below furnishes the primary vaccinations and revaccinations performed during the past 20 years:

Year.	Primary vaccina-tion.	Re-vacci- nation.	Total.
1918	19,151	12,452	31,603
1919	17,192	14,035	31,227
1920	16,500	7,772	24,272
1921	16,459	9,756	26,215
1922	16,985	33,905	50,890
1923	17,900	18,218	36,118
1924	17,633	18,603	36,236
1925	19,428	57,652	77,080
1926	19,330	6,481	25,811
1927	20,763	11,875	32,638
1928	22,051	29,591	51,642
1929	23,250	43,356	66,606
1930	25,958	33,257	59,215
1931	27,260	9,377	36,637
1932	27,076	21,757	48,833
1933	30,851	1,68,601	1,99,452
1934	28,233	19,805	48,038
1935	26,414	35,505	61,919
1936	27,286	15,893	43,179
1937	28,192	52,058	80,250

A steady record of distinct improvement under primary vaccination is maintained specially since 1927. The number of primary vaccinations during the year under report is the 3rd. highest in the above statement; so also is the number of re-vaccinations during the year. The total number of vaccinations performed in 1937 comes next to 1933 which recorded the highest.

An increase of 906 under primary vaccinations and an increase of 36,165 under re-vaccinations were recorded during the year as compared with the preceding year.

Number of Successful Vaccinations:—27,997 primary vaccinations and 5,261 re-vaccinations were successful during the year as against 27,052 and 1,459 respectively in 1936.

Success-rate:—The success-rate in primary vaccination was 99.8 being the same as that of the previous year. The success rate in re-vaccination was 15.1 as against 15.9 in 1936.

The success-rates in primary vaccination for the past 10 years are given below:

Year.	$rac{ ext{Success}}{ ext{rate.}}$	Year.	Success rate.	
1928	99.7	1933	99.7	
1929	98.5	$\overline{1934}$	99.8	
1930	99.0	1935	99.8	
1931	99.6	1936	99.8	
1932	99.9	1937	99.8	

Number of persons successfully vaccinated per 1000 population:—The number of persons successfully vaccinated per mille of population rose from 44.5 in 1936 to 51.4 during the year.

Infantile Vaccinations:— 18,779 infants under one year of age were vaccinated during the year as against 19,053 in the preceding year. Of these, 18,669 were successfully vaccinated as compared with 18,918 in 1936.

Out of 18,779 infants vaccinated, 13,918 were born in the city and 4,861 in the mofussil.

The vaccination staff continued to examine children under 5 years of age for vaccinal condition by house to house visits. Unprotected children born in the city or mofussil and whose vaccination was evaded for some reason or other were detected and vaccinated. Such a campaign was helpful in vaccinating 3,888 children.

The value of vaccination and re-vaccination was explained to the public during the course of house visits and persons who desired re-vaccination were vaccinated at the spot.

Verification of Births:—30,920 births were verified for the purpose of vaccination as compared with 28,998 births verified in the preceding year. 4,434 children died before attaining the age of one year and without being vaccinated. 6,656 children were removed from the city before they could be vaccinated. The number of children available for vaccination was 19,830. Of these, 14,283 children or 72.0 per cent were vaccinated as against 74.7 per cent in 1936.

Postponement of Vaccination in children:—The vaccination of 2,205 children was postponed for medical reasons.

Inspection of vaccinated persons:—The results of vaccination were verified by the Health Officer, the Assistant Health Officers and the Medical Vaccinators. The results of 28,046 or 99.5 per cent of the total primary vaccination and of 34,893 or 67 per cent of the total re-vaccination were verified by them during the year.

Prosecutions:—42 persons were prosecuted during the year for failure to vaccinate their children. The prosecutions of 2 others were already pending at the beginning of the year. Of these 44 prosecutions, 29 were withdrawn as the parties had their children vaccinated subsequently. 11 persons were convicted and a fine of Rs. 7–4–0 was collected. 4 prosecutions were left pending on 31–12–1937.

Cost of Vaccination:—The cost of each successful vaccination in 1937 was Re. 0-14-1 as compared with Re. 0-15-9 in 1936.

Vaccine lymph was supplied as usual by the King Institute of Preventive Medicine, Guindy.

In G. O. No. Ms. 2249 P. H. dated 7-9-1937 the Government revised the instructions increasing the number of insertions from 2 to 4 in the case of primary vaccination. This was adopted in the city and would, it is hoped, confer greater protection to the infants from small-pox.

SANITATION

The two Assistant Health Officers continued to be in immediate charge of sanitation in the two ranges of the city. Dr. S. E. D. Masilamoney, M.B.B.S., B.S.Sc., returned from England after obtaining the D.P.H. of the London University and resumed charge of his duties as Assistant Health Officer, North range, on 7th. September, 1937, on which date Dr. P. Sadasivan, L.M. & S., B.S.Sc., proceeded on leave. Consequently, Dr. G. Sreenivasan, M.B.B.S., B.S.Sc., continued to be the Assistant Health Officer and was placed in charge of the South Range. Mr. V. Venkatachalam M.A., A.I.C., continued to be the Public Analyst of the Corporation.

The city came to be divided into 40 divisions under the Amended Act and the work of the out-door staff was re-distributed.

Water Supply:—The quality of the water supply continued to be safe from a bacteriological point of view. The public, however, expect a better quality so long as they do not get a clear and colourless water. The proposals for improving the quality of water are yet to materialise. A detailed report of the Corporation Water Analyst regarding the chemical and bacteriological analysis of water will be found elsewhere in this report. There were 2,712 public water taps, 146 bathing fountains and 78 cattle troughs in the city.

Sewerage:—41,307 feet of new sewers were laid during the year. Of these, 11,233 feet were laid in Kilpauk area and 9,624 feet in Nungambakkam. The total length of sewers laid up to the end of the year was 13,08,825 feet. The scheme of compulsory construction of F.O.Ls was extended to Mylapore area. 4,008 F.O.Ls were installed in private premises during the official year as against 2,727 in the previous year. One modern type of public convenience with 3 water-closets, one urinal and one bath-room for each sex was put up in Redoubt Road, Egmore, at a cost of Rs. 3,471.

Housing:--During the year, the Health Department received 2,886 plans for the construction and reconstruction of buildings in the city and rejected 424 plans on sanitary grounds. F. O. Ls were recommended in the case of every house constructed or reconstructed within sewered areas. 1,739 new houses were constructed during the year. This is a very encouraging feature. During the past few years, the city has made a rapid progress in the matter of new buildings, which have come up in large numbers in many out-lying areas as a result of individual enterprise of the upper middle classes and the capitalists. No substantial efforts have yet been made by the Corporation to give effect to the recommendations of the Housing Committee. The condition of the lower middle and the poorer classes has not undergone any improvement. By reason of their poverty, they are compelled to live in dark, ill-ventilated, over-crowded and diseaseridden houses and fare no better than the slum dwellers in point of health and power of resisting diseases. Provision of cheap sanitary dwellings to house the middle and the poor classes is a matter of vital necessity and should not be delayed any longer.

The Sanitary Inspectors conducted a detailed inspection of 14,104 houses in the city and took action to remedy the following defects:

798 houses having no proper drainage.

580 houses having no adequate latrine accommodation.

695 houses having no water supply. 719 houses having no ventilation.

1,778 houses having miscellaneous defects such as bad flooring, bad roofing, broken walls, etc.





MODEL CATTLE YARD, BASIN BRIDGE.



HUTTING GROUND, CEMETERY ROAD.

As a result of the action taken by the Health Department, 2,197 houses were improved during the year. 415 houses which had no latrines were provided with latrines. 190 prosecutions were launched for failure to provide proper latrine accommodation.

Factories:—128 factories in the city were inspected by the Assistant Health Officers who are Additional Inspectors of Factories under the Factory Act. Sanitary defects such as unsatisfactory latrine accommodation etc., were communicated to the Chief Inspector of Factories for taking suitable action. Seven factories were provided with F.O Ls during the year.

Offensive Trades:—In G. O. No. 1673 P.H. dated 13-7-1937 the Government sanctioned the bye-laws framed by the Corporation under section 349 for the control of cattle sheds, dairies, markets (public and private), control of premises used for washing clothes and barber shops and shaving saloons. 6,488 applications for offensive trades were dealt with during the year. The schedule of fees for licensable trades was revised by the Council with effect from 1-4-1937. 1,532 persons were prosecuted for carrying on trades without licenses. Places which had been licensed were inspected frequently and 388 licensees were prosecuted for failure to observe the conditions of license.

Cattle Yards:—1,404 cattle yards were fit for license at the beginning of the year. 624 yards were rendered fit after improvements and 486 yards were condemned as absolutely unfit for license. Vigorous action was taken to remove the condemned cattle yards. 159 yards were vacated after repeated prosecutions. 1,192 cases were instituted in respect of cattle yards alone.

The Corporation maintained cattle yards at Basin Road, at Purasa-walkam and at Chintadripet. 320 animals were housed in these three cattle yards. Proposals for extending these yards and constructing new cattle yards in the city were pending consideration.

Cart Stands:—14 licensed cart stands continued to exist. The Elephant Gate cart stand belonging to the Corporation was let on contract for Rs. 5,450 for 1937-38.

Dhoby Khanas:—The Corporation maintained two dhoby khanas at Chetpet and Robinson Park. There has been a great demand for additional dhoby khanas in the city. The Council sanctioned Rs. 6,000 in the budget for 1937-38 for the construction of additional dhoby khanas and further action was pending selection and approval of suitable sites.

Eating Houses:—817 licenses were issued during the year for eating houses. There has been a steady increase in the number of eating houses and the Health Department took particular care to see that no place was licensed that did not conform to the bye-laws. F. O. Ls were insisted upon in the case of every eating house within the sewered areas. A further increase in the number of these places is likely as a result of the continuous drive maintained against the sale of trash and other cheap food in the streets. Moreover, there seems to be an evergrowing demand for eating houses and hotels in the city. Except in a few large hotels in the city, the quality of food supplied is as poor as it is cheap. This is one of the evils to which the poor citizen consciously succumbs and which can be eradicated only by raising his economic standards.

Cheries and Hutting Grounds:—The new chapter of the Act providing for action in respect of private cheries and hutting grounds under

section 257 A has not yet been tried. The preliminary step of declaring these areas as cheries and hutting grounds under section 247 A (a) with the sanction of the Council has been taken. A close examination of the provisions of this chapter in relation to the conditions prevailing in the city will reveal that the success in the reformation of these cheries ultimately depends upon the finances of the Corporation. In carrying out improvements to hutting grounds, the Health Department will urge every hut or house in such areas being provided with a separate tap and latrine as far as possible. This is necessary for preventing the outbreaks of water borne diseases.

Meat Supply:—The Slaughter Houses at Perambore continued to work satisfactorily. 4,59,941 sheep, 18,628 cattle and 1,437 pigs were slaughtered during the year. The Veterinary Superintendent of the Slaughter Houses examined the animals before slaughter and also inspected the carcasses after slaughter. The carcasses from the Slaughter Houses were conveyed by the owners themselves to the various markets and mutton stalls in the city. Surprise inspections were made by the sanitary staff to detect carcasses without municipal stamp. Permission was granted to slaughter 604 sheep at private places for religious and festival purposes. Corporation derived Rs. 85,845-4-3 from the Slaughter Houses.

There were 284 mutton stalls in the city. Besides, mutton was sold in 38 private markets and 3 public markets. The mutton stall in the public market at Mambalam was removed and located in a separate shed on the other side of Sir Thyagaraya Road.

83 stray pigs were caught and brought to the Slaughter Houses where they were auctioned and subsequently slaughtered.

STATEMENT OF ANIMALS AND CARCASSES EXAMINED

Animals.	No. brought and examined.	Number rejected.	No. of carcasses examined.	Number condemned.	No. of organs condemned.
Sheep &					
Goats.	4,68,305	8364	4,59,941	25	11,100
Cattle.	19,211	583	18,628	2	9,318
Pigs.	1,532	95	1,437	20	908

Food Control:—The Corporation maintained 6 markets, viz., the Moore Market, the Smithfield Market, the Purasawalkam Vegetable Market, the Nungambakkam Market, the Mambalam Market and the Fruit Market. There were 41 private markets at the beginning of the year and a new market at Strahans Road was opened during the year. The Sanitary Inspector in charge of the markets made periodical inspections of all the public and private markets to ensure their proper maintenance. The divisional Sanitary Inspectors frequently inspected the private jurisdiction to see markets in their that the sanitary conditions were kept up especially in the matter of prevention of gangway bazaars, provision of spittoons and general repairs to the flooring of stalls, regular washing and cleaning of drains and sufficient water supply and latrine accommodation. A F.O. L. of 16 seats was constructed in the Kotwal Bazaar. The Jam Bazaar Market was extended. Electric lights were provided in the Janda and the Chetti Garden Markets. The wholesale and retail flower vendors occupied a portion of the vacant stalls in the Corporation Fruit Market. During the year, market regulations were framed under section 308 of the Act. The license fee for private markets was fixed at 12½ % of the gross income of the owners. The Council has approved the policy of the municipalisation of markets. Further action is awaiting funds.

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INFECTIOUS DISEASES HOSPITAL, TONDIARPET.



PUBLIC CONVENIENCE, EGMORE.

The Health Department carried on a vigorous and continued drive against the sale of articles of food on the road sides and unauthorised places. A motor lorry was specially put on this work. A list of articles seized and destroyed is appended to this report. In addition to this, 293 vendors were prosecuted and convicted for selling articles of food on road sides.

Weights and Measures:—The work relating to the enforcement of the bye-laws regarding weights and measures was in charge of the two Inspectors of Weights and Measures. They visited all the public and private markets in the city periodically and checked the weights, measures and scales used by the vendors. They also inspected the shops, bazaars, godowns and depots and intercepted the itinerant vendors for testing the scales, weights and measures used by them. Defective weights, measures and scales found in possession of any vendor were seized and confiscated and any person who actually used any of these was prosecuted. During the course of the year 590 seizures were made and 20 prosecutions instituted. It is gratifying to note that the use of non-standard weights, measures and scales was rare among the merchants and traders in the various markets. It was, however, commonly found that the petty vendors from the adjoining villages bringing curds, vegetables and other articles of food continued to use non-standard and crudely made weights, measures and scales. They could not be prosecuted, but such non-standard weights, measures, and scales were seized from them and confiscated.

Medical Relief:—The Corporation continued to maintain the two Infectious Diseases Hospitals at Tondiarpet and Krishnampet. Both these hospitals were fairly full throughout the year due to the prevalence of small-pox and cholera. 2,982 patients were admitted in both the hospitals during the year. From the month of August, arrangements were made to treat all the cholera cases at the Tondiarpet hospital while the Krishnampet hospital was reserved for the small-pox cases. There were 238 admissions for cholera and 40 for small-pox from the mofussil areas. Owing to the increase in work, extra nursing and medical staff were temporarily appointed in the two hospitals. Details of the cases treated in these hospitals are furnished in the statements to be found in the appendix.

23 out-patient dispensaries were maintained during the year. Of these, 19 were of Allopathic, 2 of Unani, one of Sidha and one of Ayurvedic systems. The Ayurvedic dispensary at Thousand Lights is intended only for ladies and children. In seven of the allopathic dispensaries, separate ladies' sections were maintained. Another allopathic dispensary exclusively for ladies and children was also maintained at the Child Welfare Centre, Perambore. 24,77,108 patients were treated in all the dispensaries during the year. A statement of the cases treated in these institutions is appended.

Two leprosy and skin clinics were conducted by the Corporation, one at Vyasarpady and the other at Ice House Road. The Medical Officer of the Corporation dispensary at Vyasarpady was in additional charge of the skin and leprosy clinic there. The Ice House Road Clinic was under the direct management of the Honorary Leprosy Officer, Rao Sahib Dr. P. Parthasarathy Naidu. The total number of new cases treated at both these clinics was 6,457 during the year. The Ice House Road Clinic was provided with a microscope. 4,624 injections were given for leprosy during the year.

Arrangements were made for the treatment of skin diseases and early cases of leprosy at all the Corporation dispensaries. The clinically doubtful cases were sent to the Ice House Road Clinic for microscopic examination. The total number of skin and leprosy cases treated in the Corporation dispensaries alone during the year was 84,775. A statement

showing the skin and leprosy cases treated at the various institutions will be found in the appendix.

A free venereal clinic was opened on 1-12-1937 at No. 55, Pulianthope High Road, Perambore. This clinic is fully equipped for scientific diagnosis and treatment. There is a microscope in the clinic and smears from cases of gonorrhoea are periodically examined under the microscope to see whether the patients are free from the infecting organism. At present blood smears of patients are sent to the King Institute, Guindy, for serological examination. Better facilities are expected to be provided for women patients during the ensuing year. A statement of the work done at this clinic is appended.

Poor House:—There were 162 inmates at the beginning of the year. 268 persons were admitted, 105 were discharged and 26 died during the course of the year. With the money provided in the budget for 1937–38 improvements were carried out with a view to provide increased accommodation. Treats were given as usual to the inmates on principal festival days out of the endowments of Dewan Bahadur C. V. Viswanatha Sastriar and the ment Officials' Party. Such of the inmates as were capable did light work in gardening.

His Highness the Maharaja of Travancore was pleased to give an endowment of Rs. 1,000. the interest accruing therefrom to be utilised for entertaining the inmates of the Poor House on His Highness's birthday every year.

The Council appointed an Ad Hoc Committee to consider the beggar problem in the city. The studied report of this committee was considered by the Council at its meeting held on 7–9–1937 and the following resolutions were passed:

- "While approving of the report submitted by the Ad Hoc Committee on the beggar problem, this Council resolves that a home be constructed for the housing of 500 lepers and syphilitic lepers and about 50 paralytics and about 20 idiots or imbecile persons on the lines suggested by the Committee and further directs the Commissioner to submit a detailed estimate as regards the financial commitments involved in such a scheme."
- "This Council resolves further to appeal to the Government of India, the Provincial Governments and to the Provincial Leprosy Board as well as to the public for substantial contribution towards the construction of the house above-mentioned and also the maintenance thereof".
- "This Council further resolves to start a home to accommodate 100 destitute child beggars in which adequate instruction and education shall be given to the children and the expenses for this purpose may be met out of the Education Fund to the extent to which it is possible to do so".
- "This Council further resolves that in providing the home abovementioned, women and girls will be separated from men and boys dealt with under the scheme".

A scheme was drawn upon the basis of the resolution of the Council for constructing a home at a cost of $5\frac{1}{2}$ lakhs of Rupees. The subject is pending consideration by the standing committees.

Anti-rabio Measures:—6,738 dogs and 6,440 bitches were seized during the course of the year and removed to the Lethal Chamber where 6,526 dogs and 6,390 bitches were destroyed by electrocution. 153 dogs and 43 bitches were restored to the owners on payment of the necessary fees.





SLUM NEAR E (CATTLE) DEPOT, KRISHNAMPET. IMPROVEMENT IN PROGRESS.



SLUM NEAR E (CATTLE) DEPOT, KRISHNAMPET.

10,582 dogs and bitches were captured between April and September. Efforts in this direction had to be relaxed from October owing to the inadequacy of funds to meet the expenditure and a supplemental demand for Rs. 2,000 was made. A motor van was used for conveying the dogs caught.

Zoological Garden:—The Zoological Garden continued to be under the control of the Health Department and in the charge of a qualified Superintendent assisted by a staff of Sergeants and Animal Keepers. During the year, several improvements were effected with the sum of Rs.13,250 provided in the budget for the purpose. The right of collecting the entrance fees from the visitors to the zoo for a period of three years was sold on contract for Rs. 59,500. The annual contract for the right of plying pleasure boats in the zoo lake continued till 31–3–1938. A detailed report on the administration of the zoo will be found in the Commissioner's Administration Report for 1937–38.

Publicity and Health Education:— Health propaganda was regularly conducted in every civision of the city throughout the year with a view to inculcate civic conscience in the minds of the citizens. The attention of the public was drawn to the importance of personal and domestic cleanliness. To educate them about the ways and means of preventing diseases like tuberculosis, etc., and infectious diseases like cholera, etc., lectures with the aid of magic lanterns, cinemas, and radio talks were conducted. There were 887 magic lantern shows, 96 cinema shows and 1,155 talks during the year. Printed pamphlets on health subjects were freely distributed to the public during the epidemic seasons. A civic exhibition was, as usual, conducted in the Exhibition Grounds of the S. I. A. A. during the annual Park Fair.

CONSERVANCY

The Drainage Superintendent continued to be in charge of the conservancy work in the city. Mr. W. L. Edwards went on leave for 2 months from 15-9-1937 and Sri A. Ramiah was appointed to act in his place as Drainage Superintendent. The Sewer Foreman and Sewer Superintendents continued to be under his control. Mr. V.J. Balasundara Doss, G.M. V. C., was the Veterinary Officer in charge of the veterinary work relating to the Cattle Depots and the Zoo.

General:—The total expenditure on conservancy for the year 1937-38 was Rs. 10,79,261 (Rs. 55,187 capital and Rs. 10,24,074 ordinary) against Rs. 9,75,459 for 1936-37. The amount spent on wages for conservancy labour was Rs. 6,64,567.

Cleaning Staff:—There were 2,464 male coolies, 202 women coolies and 432 boy coolies for the cleaning of streets, drains, syphons, water tables and latrines. 30 adults and 60 boys were newly sanctioned from 1-4-1937. There were 160 peons to supervise their work. The following carts were engaged for the removal of rubbish, filth, sewage and silt from all the divisions.

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verient.

No. of trollies, double and single draught carts for the removal of rubbish ... 420.

No. of night-soil carts 97.

No. of sewage and silt carts ... 59.

Separate gangs of coolies were formed for the special conservancy of slum areas.

Animals:-The number of bullocks on hand on 1-1-1937 was 815 as against 870 on 1-1-1936. 98 bullocks were purchased during the year for Rs. 10,486 making up a total of 913 bullocks. 144 bullocks died during the year as against 134 in the previous year, leaving a balance of 769 bullocks at the end of the year.

Of the casualities, during the year, 83 died of old age and general debility, 23 of tuberculosis, 4 of anthrax, 4 of piroplasmosis, 4 of bronchopneumonia, 4 of bovine lymphangitis and 22 of other causes.

Foot and Month Disease:—There was no outbreak of foot and mouth disease among conservancy bullocks although the city was infected with it. There was only one case at Basin Bridge Conservancy Depot and all preventive measures were immediately adopted to prevent further spread.

Tuberculosis:—There were 23 deaths from tuberculosis. By the nature of their work, conservancy bullocks are easily exposed to tubercular infection and they contract this disease very quickly. All possible preventive measures were adopted. All the conservancy bullocks were periodically tested for tuberculosis with tuberculine tests. Every animal showing clinical symptoms of tuberculosis was immediately destroyed. All animals suspected of tuberculosis were immediately segregated at the Veterinary Isolation Hospital at Vyasarpady and tested with tuberculine. The reactors were destroyed at once.

Rinderpest:—There were no deaths from rinderpest during the year as all the bullocks were protected against it with sero-virus method.

Anthrax:—There were 4 deaths from anthrax, one at Basin Bridge Depot and 3 at Choolai Depot. The spread of the disease was effectively checked by adopting immediate preventive measures and by protecting other bullocks with anti-anthrax serum.

Piroplasmosis:—There were 4 deaths from piroplasmosis. All prompt measures were adopted to stamp out the disease.

Bovine Lymphangitis:—There were 4 deaths from bovine lymphangitis. All the affected ones were immediately segregated and treated and thus the disease was brought under control.

Animals treated at the Conservancy Cattle Depots and at the Veterinary Isolation Hospital, Vyasarpady:—851 cases were treated for various illness in the conservancy cattle depots and 89 animals which were suffering from contagious diseases or required special attention and treatment were brought to the Veterinary Isolation Hospital and treated there.

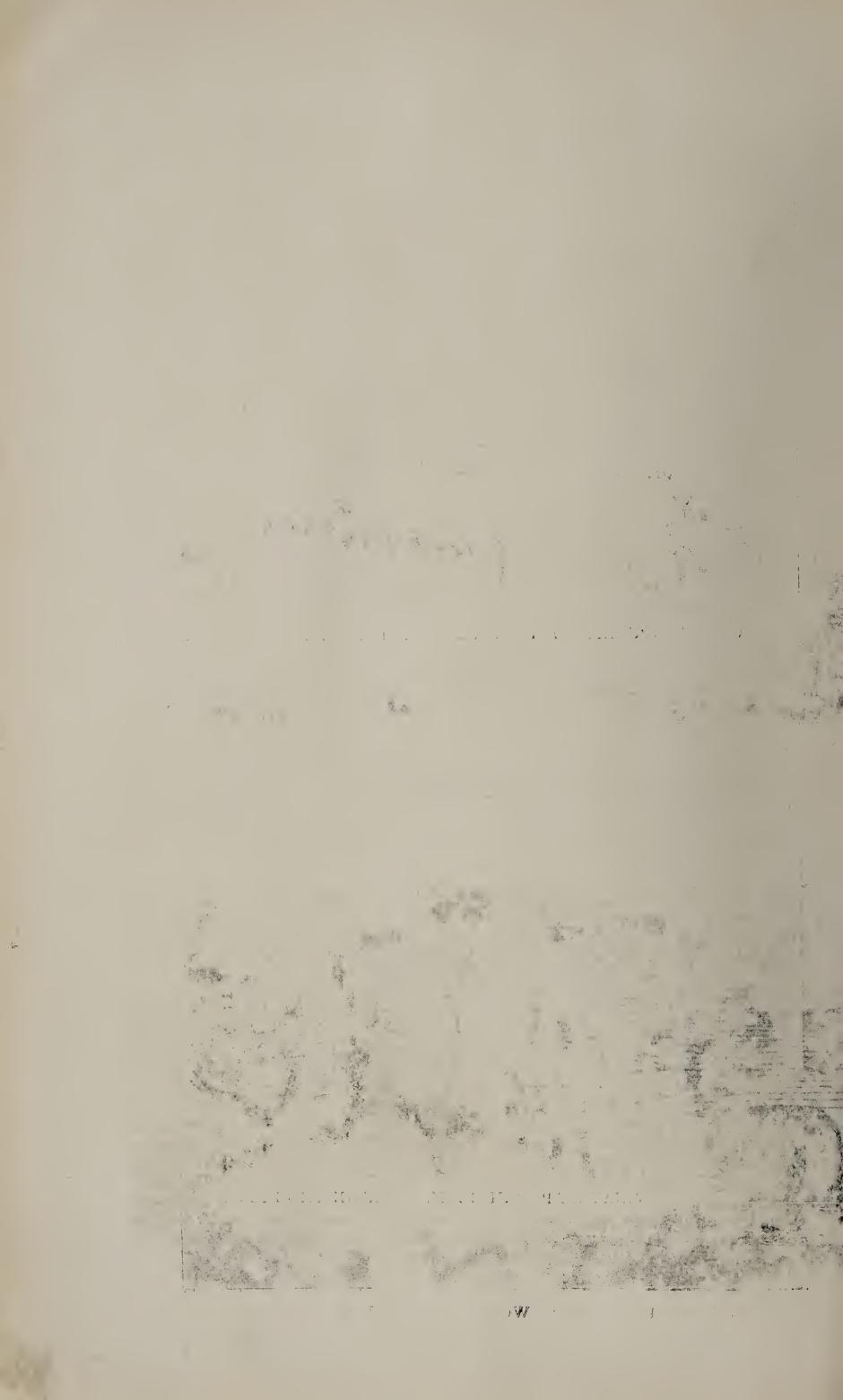
Mechanical Engineer. Motor lorries required for the removal of rubbish and filth in the city were marched out daily from the Lorry Station under the direction of a Sanitary Inspector, who was posted there for the purpose. The charges for the supply of lorries were originally debited to the Health Department at 7 annas per mile for light lorries and Rs. 12 per day for heavy lorries; but they were subsequently reduced to 5 annas per mile and Rs. 10 per day respectively. The total amount debited to the conservancy grant during 1937-38 is Rs. 1,51,523-2-6. Six new lorries were purchased during the year at a cost of Rs. 19,745 (3 International and 3 Reo chassis).



VINAYAKAPURAM HUTTING GROUND. IMPROVEMENT IN PROGRESS.



VINAYAKAPURAM SLUM. WORK IN PROGRESS.



Tipping Platforms:—There were two Tipping Platforms, one at the Basin Bridge Depot and the other at the Langs Garden Pumping Station. Both of them worked satisfactorily.

Carts:—With the sum of Rs. 5,000 sanctioned in the budget for pneumatic tyred wheel carts, one night-soil cart was purchased and 30 double draught rubbish carts were converted into single draught rubbish carts and fitted with pneumatic tyres.

The Corporation Workshop manufactured the following: 27 iron hand-carts for Rs. 2,067. 1,227 dust-bins for Rs. 9,979. 300 night-soil buckets for Rs. 6,600.

The question of manufacturing an up-to-date model of dust-bin suitable to the varying local conditions has been engaging the serious attention of the department. Some time ago, corrugated zinc dust-bins with bottom were tried; but they were found to be unsatisfactory as the bottom gave way very soon. There was also the risk of the bins being stolen. Bins without bottom were so light that they were often removed from their places by stray cattle. During 1937 round reinforced concrete slabs were made to fit into the zinc dust-bins so that the bins may not be easily overturned by cattle or shifted by the public from their original places. These slabs also served as bottom to the bins.

Disposal of Rubbish:—About 5,93,65 3 cart-loads of rubbish were removed from the city during the year as against 8,82,147 in the previous year. Of these, 62,885 cart loads were burnt at the two Incinerators maintained by the Corporation after separating the earth and other incombustible materials. 3,35,485 cart-loads were dumped at the Korukupet, Ottery and Mylapore Dumping Grounds. 1,95,283 cart-loads were used for raising low-lands. By its resolution dated 2-3-1937 the Council gave permission to fill up low-lying lands in the city with rubbish provided each day's deposits were covered over by earth. Reclamation works which had been stopped for some time owing to the restriction imposed by a previous resolution against the use of rubbish for such works were restarted during the year. 19,247 cart-loads of incinerator ashes and screened earth were removed by private parties, free of charge, for raising low-lands.

Disposal of Filth:—The Corporation continued to maintain 3 Pail Depots and 2 Night-soil Depots for the disposal of filth. The Pail Depots at D'Mellows Road, Ice House Road and Langs Garden worked satisfactorily throughout the year; coal-tar had to be burnt at these depots to mitigate stench.

90,914 cart-loads of filth were removed from the city against 86,826 cart-loads removed last year. Of these, 58,027 cart-loads were flushed into the sewers at the pail depots and the restrenched in the two night-soil depots at Korukupet and Ottery. The amount realised by the sale of manure from the trenching grounds during 1937-38 was Rs. 5,850.

Public Latrines:—297 public latrines existed in the city during the year under report. Of these, 241 were of the flushout type and 34 were masonry ones. The remaining were sanded latrines. One modern public convenience was constructed at Redoubt Road, Egmore, during the year. All the public latrines were lime-washed. Special care had to be bestowed on the sanded latrines to ensure their continued cleanliness. 1,153 gallons of technocol and phenyle were utilised during the course of the year for the disinfection of these latrines and drains.

5,841 parahs of chunam were used near dust-bins, road-sides, streetcorners and other places rendered untidy by the committal of nuisance.

Festivals:--During the yearly festivals at Mylapore and Triplicane, conservancy arrangements were specially provided for the convenience of the crowds gathering in large numbers at these places. The conservancy of the S.I.A.A. grounds during the annual Park Fair and Exhibition was, as usual, undertaken on payment of charges.

Private Scavenging:-The removal of rubbish and filth from several public institutions in the city was carried out by this department as per section 197 of the City Municipal Act. The total income realised by way of fees during 1937-38 was Rs. 24,528-15-7.

Nuisance:--The conservancy staff paid particular attention to the cleaning and disinfection of places where there was frequent committal of nuisance. The Police authorities prosecuted a few of the offenders with a view to abate this nuisance in the areas most affected. To warn the public against committal of nuisance, notice boards were put up in several parts of the city.

Labour:—In pursuance of G O. No. 4,942 L & M dated 22-12-1931, the coolies who retired on account of old age and infirmity were granted bonus. 306 coolies occupied tenements in the Corporation Model Lines and 311 lived in huts on Corporation land. The labourers had their needs well attended to. Cases of grievance brought to the notice of the Health Officer and the Commissioner received the utmost consideration and were personally enquired into.

ANTI-MOSQUITO MEASURES

During the year under report the activities of the Malaria Section were very much intensified consequent on the additional staff appointed during the year. After the stegomyia survey was over in October, 1936, the staff (5 overseers and 5 coolies) was kept on to carry out the control measures against these mosquitoes in the surveyed area, i. e., portion of the city half a mile round the Madras Port limits. This staff was further augmented by additional 3 overseers and 3 coolies from November, 1937. The separate staff of one maistry and 2 coolies employed for combating mosquito nuisance in Thyagaroyanagar continued to work during the year and an additional maistry and a cooly were added on to it since November, 1937. House inspections were organised in unsewered, garden and other areas in the city where the mosquito nuisance is always severe and the special staff of 20 maistries and 40 coolies sanctioned during the year were utilised for this purpose from November last. The appointment of 4 additional gangs for stocking wells with larvicidal fish helped to bring about a better and more effective control of the wells than before. Greater attention was paid to the systematic and regular oiling of the covered and open drains, ditch drains, cesspools, gulley-traps and stagnation in public places etc., after the appointment of 2 additional oil gangs during the year.

The original staff consisted of, as usual, one Medical Officer, 2 Super visors, 6 maistries and 68 coolies. An additional Supervisor was appointed from November last along with the other extra staff to cope up with the increased activities of the section.

The various aspects of the anti-mosquito work are dealt with below:

:

Tanks and Ponds: 470 tanks and ponds existed at the beginning of the year. The method of control consisted in keeping them free from

forth and extends the control of the



RAMAKRISHNAPURAM HUTTING GROUND. IMPROVEMENT IN PROGRESS.



SCAVENGERS HUTTING GROUND, OLD SLAUGHTER HOUSE ROAD.

2.

weeds, moss, floating matter and rank vegetation at the edges and stocking them with larvicidal fish. The owners were accordingly notified to this effect. They were also informed that the Corporation would undertake to do the periodical cleaning on payment of certain charges in advance. The owners of 182 ponds paid the charges and the work was executed by the Corporation malaria staff after collecting from them a sum of Rs. 1,943-2-0. The owners of 146 ponds made their own arrangements. It was found that such cleaning was unsatisfactory and not periodically done. 5 private ponds were cleaned free of charge on account of their receiving storm water from the surrounding areas. 9 Corporation tanks were also attended to by the staff. All the ponds and tanks were stocked with larvicidal fish.

As a result of action taken against the owners, 7 ponds were reclaimed during the year. Of these, 6 ponds belonged to private owners and one to the Corporation. Action was not taken in respect of ponds that were clean and free from larval breeding and those that were dry.

Wells:—During the year under report greater attention was paid to the control of wells in the city than in previous years. This was due to the additional staff appointed about the middle of the year. The total number of fish gangs was thus raised from 2 to 6. The inspection and stocking of wells with larvicidal fish was done at intervals of 3 months instead of 10 months.

Nearly I5,000 wells exist in the city and more wells are being sunk in areas where extension is going on. The staff examined the wells for the presence of mosquito larvae and stocked them with larvicidal fish. The result of the inspections so far made by the staff during the year is summarised in the statement below. It will be observed that there had been a considerable improvement in this direction.

1st, round 2nd. round 3rd. round	Percentage of wells with fish alive.	Percentage of wells with mosquito larvae.	Percentage of wells with anopheles larvae.		
1st. round	52· 4	= 8.7	5.1		
2nd. round	75.6	6.3	2:5		
3rd. round	85.3	5· 3	2.0		
4th. round*	89.9	2.8	1.2		

*Incomplete round. The figure is prepared on the number of wells examined up to 31–12–1937.

During the previous year, 1936, the percentage of wells with fish alive was 41 and the percentage of wells breeding mosquito larvae was 17.6 and the percentage of wells breeding anopheles larvae was 11.6.

As pointed out in previous reports, the wells form the chief and permanent breeding places of Anopheles stephensi (malaria carrier), Aedes aegypti (vector for yellow fever, dengue and filariasis) and Culex fatigans (transmitter of filariasis). It is always found that wells not in daily use are commonly the breeding grounds of these mosquitoes. Absence of fish and foul condition of the water in the wells give rise to severe breeding. Sometimes the presence of floating matter in wells already with fish alive helps to favour the breeding. This is due to the larvae taking shelter under the floating matter and escaping the fish. The fish gangs removed the floating matter and stocked fish into every well. Bad wells were oiled with kerosine oil and stocked with fish after 10 days. 401 such wells received this attention and action was taken in respect of these wells for enforcing permanent measures such as filling or covering with Cuddapah slabs. During the year 702 wells were filled up, 229 wells covered with Cuddapah slabs and 656 wells provided with trap-doors. These figures include cases in which action was taken against the owners by the department.

Gambusia was put into wells as well as into ponds, tanks, garden cisterns and fountains. This larvicidal fish is a voracious larvae-eater and very useful for mosquito control and has been obtained from the fish pond in the compound of the Infectious Diseases Hospital, Tondiarpet, and from several ponds and tanks kept as nurseries in different parts of the city. It has now become one of the local fishes and can be said to be acclimatised to this place.

In view of the fact that dangerous types of mosquitoes breed in the wells it behaves that a general policy, as advocated in the stegomyia survey report, should be a topted to enforce, as a permanent measure, covering of all wells where tap supply of water is available. If a demand is made to use the water from any well, it should be provided with a pump. Sanction to dig out new wells should be refused in areas where there is already municipal water supply.

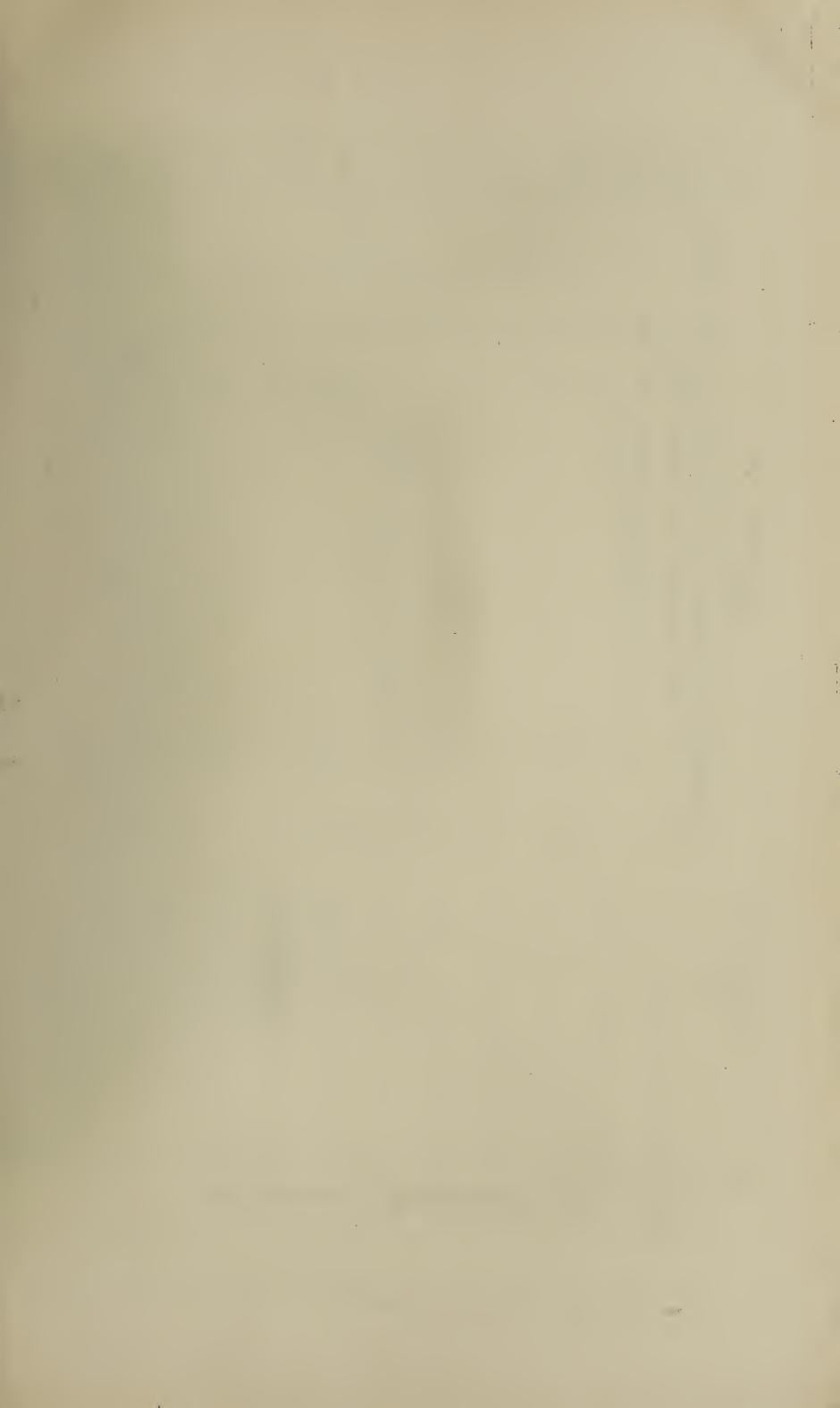
In addition to the stocking of wells with fish, the fish gangs inspected the entire premises during the course of their work and destroyed 1,373 breeding grounds of mosquitoes such as collections of water in broken vessels, tins, cisterns, tubs, drains etc. after showing them to the occupants.

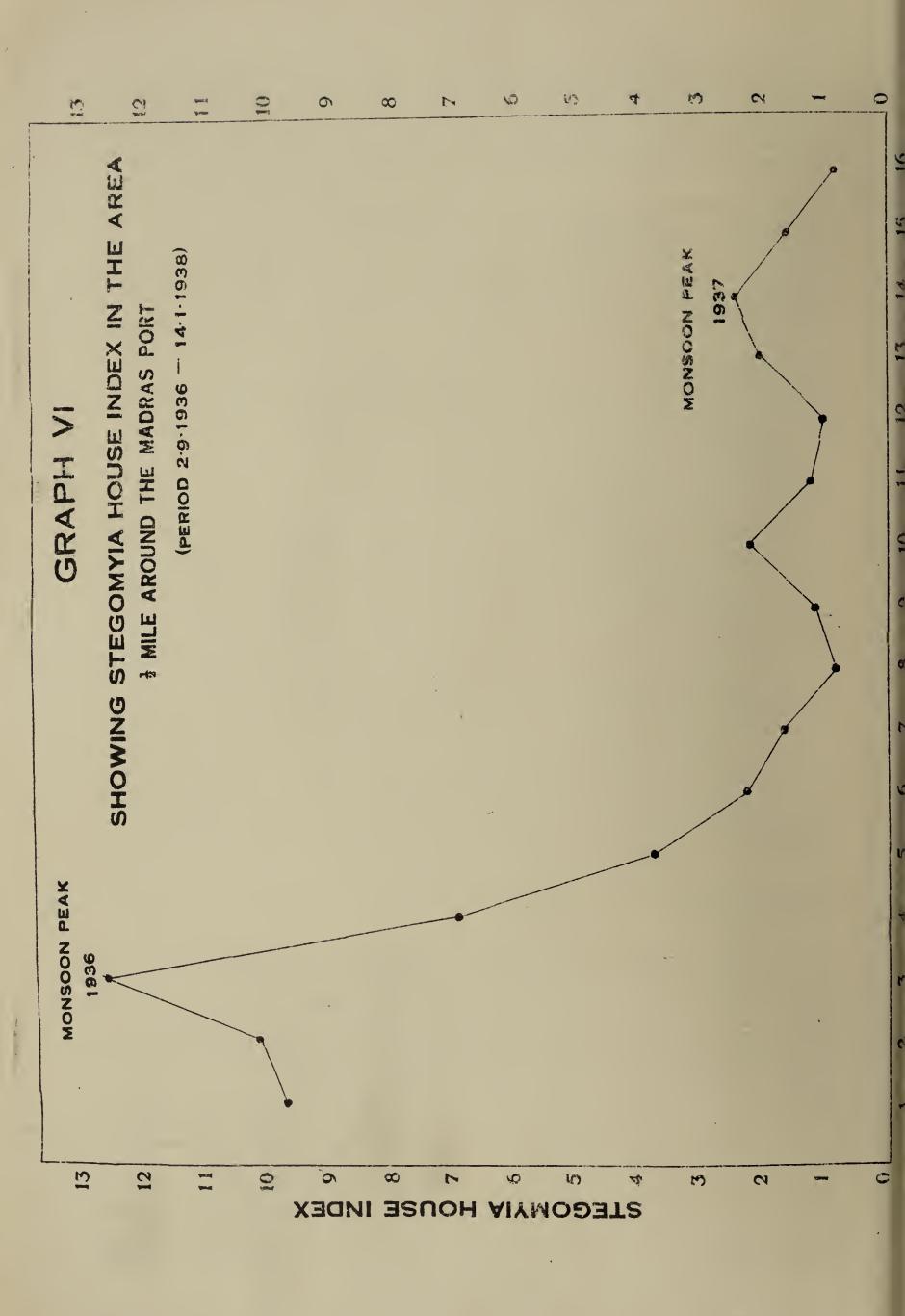
Anti-stegomyia operations:—After the completion of the stegomyia survey in the portion of the city half a mile round the Madras Port limits from 2-9-1936 to 2-10-1936 (vide stegomyia survey report already published in the Administration Report for 1936) the statf (5 overseers and 5 coolies) were kept on to carry out the control measures in the surveyed area. This area was gone round once in a month by this staff. The addition of 3 more overseers and 3 more coolies to this staff from November, 1937, made it possible to cover the area once in 20 days. The area was divided into 8 blocks and a squad of one overseer and one cooly was in charge of each block.

This special area was inspected 16 times from the time of the survey upto 14-1-1938 and during the course of each inspection the control measures were brought into operation. Every premises was inspected by the staff and all wells, cisterns, drains, fire-buckets, ant-wells, storage of water etc., were examined for the presence of mosquito larvae. Larvae samples were collected from every breeding place which was destroyed in the presence of the occupier. Action was taken to enforce measures for future control as will be mentioned presently. Marked improvement has been noticed since the beginning of this special work. The mosquito and stegomyia house indices set forth below will prove this fact.

No. of rounds.	Period of inspection		Mosquito house index.	Stegomyia house index.
1		2-10-36	14.0*	9.9*
$\frac{2}{3}$		8-11-36	13.4	10.3
		5-12-36	16.3	12.8
4		4- 1-37	9.4	7.0
5	25-1-37 to	4_ 3_37	7.5	3.8
6		5-4-37	5.6	2.3
7	6-4-37 to 14	1- 5-37	2:9	1.7
8 9	15-5-37 to 13	3_ 6_37	1.7	0.8
9	14-6-37 to 13	3- 7-37	$\overline{1}$.7	1.1
10	14-7-37 to 12	2- 8-37	$\overline{3}$ ·1	2.2
11		- 9-37	1.9	$\overset{\sim}{1}\overset{\sim}{.2}$
12		2-10-37	1.3	1.0
13		2-11-37	2.6	_
14		-12-37	3.0	2.0
$\overline{15}$		3-12-37	2.0	2.4
$\overline{1}6$		-1-38	$\overset{z}{1}$.	1.6
-		* 0	1 %	0.85

Survey Index.





Speaking of the stegomyia house index, it was 9.9 at the time of the regular survey. As the monsoons set in immediately after the survey the index rose to 10.3 and 12.8 in the subsequent two rounds. The carrying out of the control measures brought about a substantial reduction in the other subsequent rounds as will be seen from Graph VI. It is gratifying to note that the 'monsoon peak' of the year under report shows a reduction by 5 to 6 times as compared with the 'monsoon peak' in 1936. The stegomyia house index for each round was furnished to the Director of Public Health for his information.

The reduction in the number of mosquito breeding places in the special area during the period under report is seen from the statement below:

No. of rounds.	Mosquito breeding places. (including stegomyia).	Stegomyia breeding places.
1	1,238	959
2	1,532	1,184
3	1,7 93	1,264
4	1,176	888
$rac{4}{5}$	720	351
6	569	238
7	365 $^{\circ}$	227
8	161	81
9	182	118
10	387	241
11	217	163
12	156	118
13	311	225
14	$\overline{377}$	304
15	238	188
16	148	96

The statement set forth below shows the improvements effected in the control of some of the important mosquitoe breeding places from the commencement of the stegomyia operations up to the time under report.

										0.00		
ounds.	Percer wells b	ntage of preeding.	Percen drains b	tage‡of oreeding.	Percent surface bree	tage of cisterns ding.	over-hea	itage of did tanks eding.	Percenta fire-bu breed	ckets	Percent other contain breed	water ners
No. of Rounds.	Mosquito larvae.	Stegomyia larvae.	Mosquito larvae.	Stegomyia. larvae.	Mosquito larvae.	Stegomyia larvae.	Mosquito larvae.	Stegon.yia larvae.	Mosquito larvae.	Stegomyia larvae.	Mosquito larvae.	Stegoniyia Jarvae.
1 2 3 4 5 6 7 8 9 10 11 12 18 14 15 16	15.1 12·1 13·7 12·2 15·0 12·4 4·2 4·7 4·2 3·9 3·5 2·6 3·8 2·0 1·1 1·5	7.0 5.5 8.2 6.7 5.1 3.9 2.2 2.0 2.4 1.1 1.9 1.8 2.0 1.0 0.6	0.5 0.5 0.5 0.5 0.4 0.5 0.2 0.1 0.1 0.1 0.1 0.1 0.09 0.1	0·2 0·2 0·4 0·3 0·1 0·09 0·05 0·05 0·03 0·06 0·06 0·06 0·09	5.8 9.9 10.7 9.4 3.9 2.6 0.9 1.0 4.4 1.4 1.2 2.2 1.5 1.9 1.1	4.5 6.5 9.2 6.8 2.8 1.4 1.8 0.4 0.7 2.03 1.3 0.85 1.3 0.83 1.3	1.6 3.3 2.3 2.6 1.9 5.3 2.1 0.7 1.6 1.9 1.9 0.8 1.7 2.9 0.9	1·3 0·7 1·6 1 9 1·0 • 2·7 0·9 0 7 1·1 1·2 1·0 0·6 1·3 2·9 0·9	22.5 13.7 2.0 7.2 10.7 1.4 0.9 0.4 0.8 	22·1 13·7 1·6 4·1 6·4 0·9 0·4 0.4 2.8	Not ava 8'6 6'8 3'9 1'3 1'1 1'5 0'4 0'4 2'0 0'9 0'9 2'4 2'6 1'4 0'7	ailable 7.5 4.7 2.6 0.9 0.7 1.1 0.3 0.4 1.6 0.8 0.8 1.7 .3 1.2 0.5

To enlist the co-operation of the citzens, pamphlets in English, Tamil, Urdu and Telugu were printed and distributed in every premises in the surveyed area. The objects of the anti-stegomyia campaign were explained in these pamphlets.

The mosquito breeding places were shown to the occupants before they were destroyed and the methods of prevention were explained to them. During the subsequent inspections, printed advice memorandum containing the nature of breeding places and the methods of control was serve I on the owners or occupiers in whose premises larvae were found to breed. This had a salutary effect on them in carrying out the preventive measures. Nearly 1,303 such notices were issued. Public offices, firms etc. were addressed to carry out the necessary measures wherever breeling was noticed in their premises as in wells, fire-buckets, drains, over-head cisterns, flush-out tanks, ant-wells etc. To prevent breeding in the storage of water in brass and earthen vessels in private premises, general instructions were issued to renew the water once in 2 to 3 days and to keep such receptacles always covered with lids. As mentioned in the stegomyia survey report, water stored in pots, tubs, drum; or cisterns and kept near flushout or dry latrines for the purpose of flushing out or washing the latrines was a common breeding ground of stegomyia mosquitoes. Special efforts were taken to discontinue this practice. In many instances, the pots, tubs and drums etc. were removed from the premises with the permission of the owners who were advised to supply water directly to the scavenger. In other instances, instructions were issued to cover the receptacles with lids and to empty them once in 2 to 3 days.

The anti-mosquito campaign in Thyagarayanagar continued during the year also and was similar to the anti-stegomyia operations conducted in the special area. One maistry and 2 coolies attended to this work augmented by one more maistry and one cooly since November, 1937. The staff paid weekly visits to all the private premises and public places. All wells, cisterns, arains, cess-pools, stagnations in pits and low-lands and collections of rain water in discarded tins, cans, bottles, pots etc., were prevented from becoming breeding grounds of mosquitoes.

A similar intensive anti-mosquito work was also organised in certain unsewered and garden areas in the city where the nuisance from mosquitoes is always severe. This campaign was started in the municipal divisions 20, 21, 22, 26, 27, 28, 29, 36, 37 and 40 from November, 1937, with a staff of 20 maistries and 40 coolies. All the premises were inspected by the staff and all breeding grounds of mosquitoes detected were destroyed. During the first inspection of the whole area, the mosquito house index was 36.4. It came down to 16.4 during the second inspection. It showed a further reduction from 16.4 to 9.5 during the last inspection at the end of the year. The number of mosquito breeding places that were destroyed by the staff during the house inspection work was 6.613 in the first round, 3.021 in the second round and 1,840 in the third round. During the course of this work, the staff cleared away from the premises 25,320 odd and unserviceable articles which would otherwise have collected rain water and become numerous breeding grounds of mosquitoes. As the campaign was started during the monsoon season, the residents of these localities had a great relief from mosquito nuisance.

Such mosquito control measures in private premises are needed throughout the city instead of in selected areas. The occurrence of the various breeding grounds within residential premises has been already brought to light in the stegomyia survey report as well as in this report. House inspection should therefore form part of the general anti-mosquito campaign.

Public drains, cess-pools, stagnation etc.:—All the covered drains open drains, ditch drains, cess pools and gulley traps in public places were petrolised once a week by the two petrolising gangs. The appointment of 2 additional gangs from May, 1937, made it possible for a more systematic and regular attention to be paid to all these places as well as to prevent the breeding in low-lands, ditches, excavations etc., in public places.

River Cooum and Buckingham Canal:—The sluggish flow and the weedy margins of the River Cooum and Buckingham Canal give rise to breeding of mosquitoes which cause nuisance in the localities in which the river and the canal pass. The present staff is quite insufficient to attend

to these places regularly. A separate staff is necessary to clear away the weeds and moss from the margins periodically and to oil the edges weekly. Pools form on the banks after the rains and require attention also.

Low-lands:—In addition to the 7 ponds reclaimed during the year, portion of low-lands were reclaimed in Dr. Vijayaraghavalu Road, in the Perambur Tank, behind Conran Smith Nagar, next to Record Office, near Kodambakam Road, at the junction of Kanda Pillai Street and Vydianatha Mudaly Street in Chetput, in Appasawmy Mudaly Street, in Venkatanarayana Road, near Greenaway Road and in front of the Slaughter Houses. Pits were filled up in Harinarayanapuram, Old Slaughter House Road, Mackays Garden, Washermanpet Hindu Burial Ground and Elaya Mudaly Street.

Malaria cases treated in Corporation Dispensaries:—During the year under report, 9,767 malaria cases were treated in the several Corporation dispensaries as against 1,7697 in 1936.

Microscopical Examination of Bl od smears—2,450 blood smears received from the Medical Officers of the Corporation dispensaries were microscopically examined for malarial parasites. Of these, 749 smears were positive, i.e., 30.6 per cent.

The following table gives the number of blood smears received from the Corporation dispensaries.

the Oorpotation disponsatios.					
Name of the Dispensary.	No. of blood smears received.	Ranign	smears in arial para were four Malig- nant Tertian.	sites	Percentage of smears positive.
Washermanpet Dispensary. Royapuram """ Mint """ Trevelyan Basin """ Mafuskhan """ Mannady """" Pulianthope (Allopathic) """ Pulianthope (Allopathic) """ Perambur Dispensary """ Vyasarpady """ Baliah Naidu """ Kosapet """ Kilpauk """" Kilpauk """" Nungambakkam """ Mambalam """" Triplicane """" Triplicane """" Pudupakkam """ Pudupakkam """ Pudupakkam """ Teynampet """ Pulianthope (Unani), """ Choolai (Siddha) """ Thousand Light(Ayurvedic) Thayar Sahib St. (Unani) """	20 108 736 187 115 19 102 21 40 71 67 57 31 8 316 13 57 10 27 1 96 6	75 3 29 208 37 23 7 5 7 10 16 5 4 4 78 1 4 1 1 34 2 3	18 4 10 88 10 6 5 2 4 7 1 4 2 22 2 6 1	93 7 39 296 47 29 12 5 9 14 23 6 8 6 100 1 6 1	27.8 35.0 36.1 40.2 25.1 25.2 63.1 4.9 42.9 35.0 32.4 8.9 14.0 19.3 31.6 7.7 10.5 10.0 41.7 50.0 42.9
	2450	557	192	749	30.6

Cases of enlarged spleen among Corporation school children:—During the school year, 1937–38, the medical inspection staff attached to the Corporation schools detected 49 cases of enlarge! spleen among children attending the Corporation schools as against 118 cases in the previous year. Of these, 46 cases were found among the children attending the Corporation schools situated in the north range as compared with 100 cases in 1936.

MEDICAL INSPECTION OF CORPORATION SCHOOLS FOR 1937-38

Staff:—The Council sanctioned the appointment of one honorary Medical Inspector and one honorary Medical Inspectress in the budget for 1937-38. They joined duty in August and September respectively.

Findings of Medical Inspection:—The average number of children on the rolls during the year was 20,576 in boys' schools and 15,549 in girls' schools. The average attendance during the time of the inspections was 16,812 among boys and 11,796 among girls. 18,199 boys and 12,988 girls were medically examined during the year as against 17,761 boys and 11,615 girls during the previous year. The percentages of children examined to the total number on rolls were 88'45 among boys and 83'53 among girls.

Out of the total number subjected to medical examination, 8,838 boys (48.56 per cent) and 4,722 girls (36.36 per cent) were ailing and required treatment. The percentages of defectives during the previous year were 51.13 among boys and 35.87 among girls.

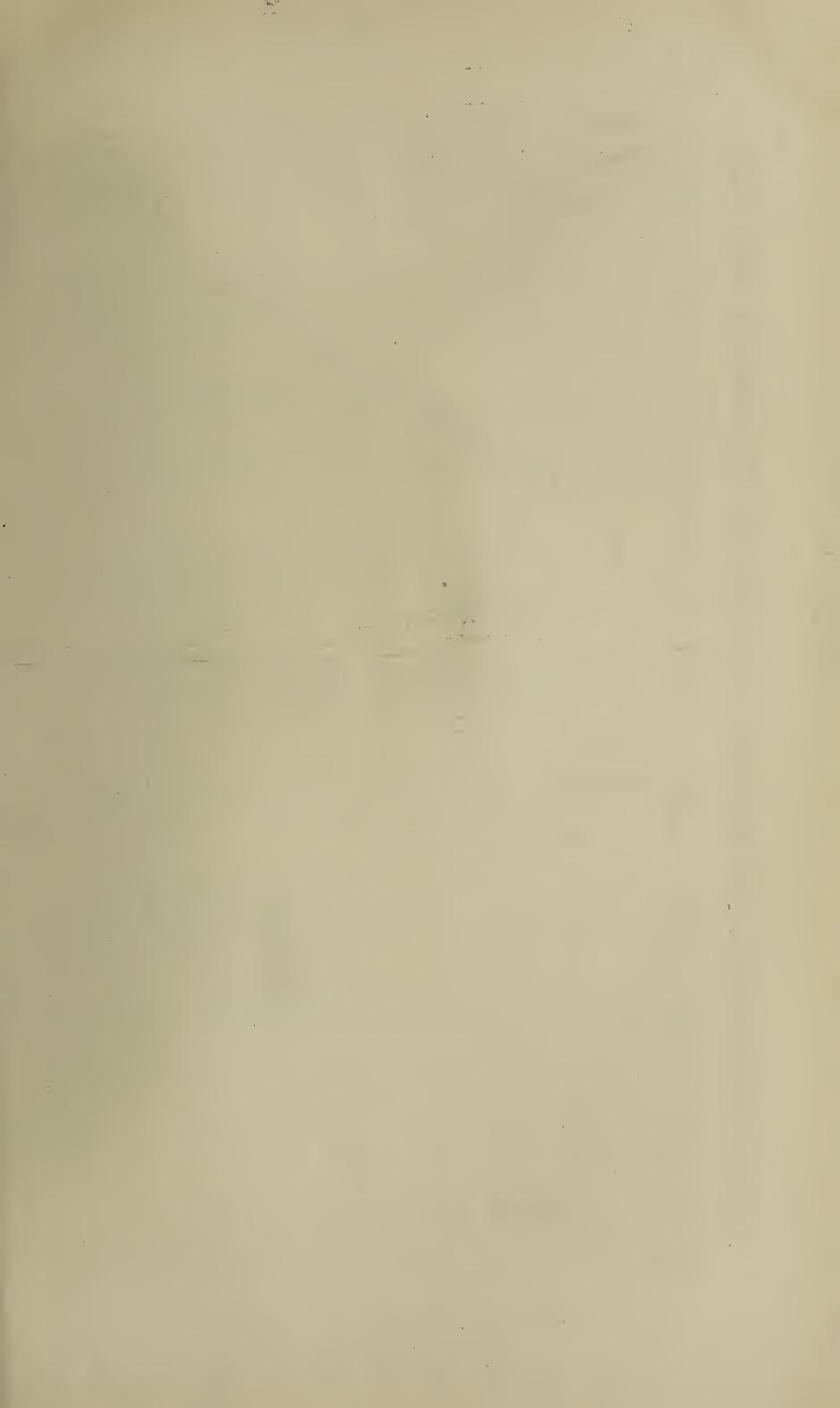
There was general improvement in the health of the boys. Improvement was noticed in the nutritional condition of boys and the incidence of infectious diseases was low. The health of the girls was almost at the same level, only an increase of 4.9 per cent being recorded in the year.

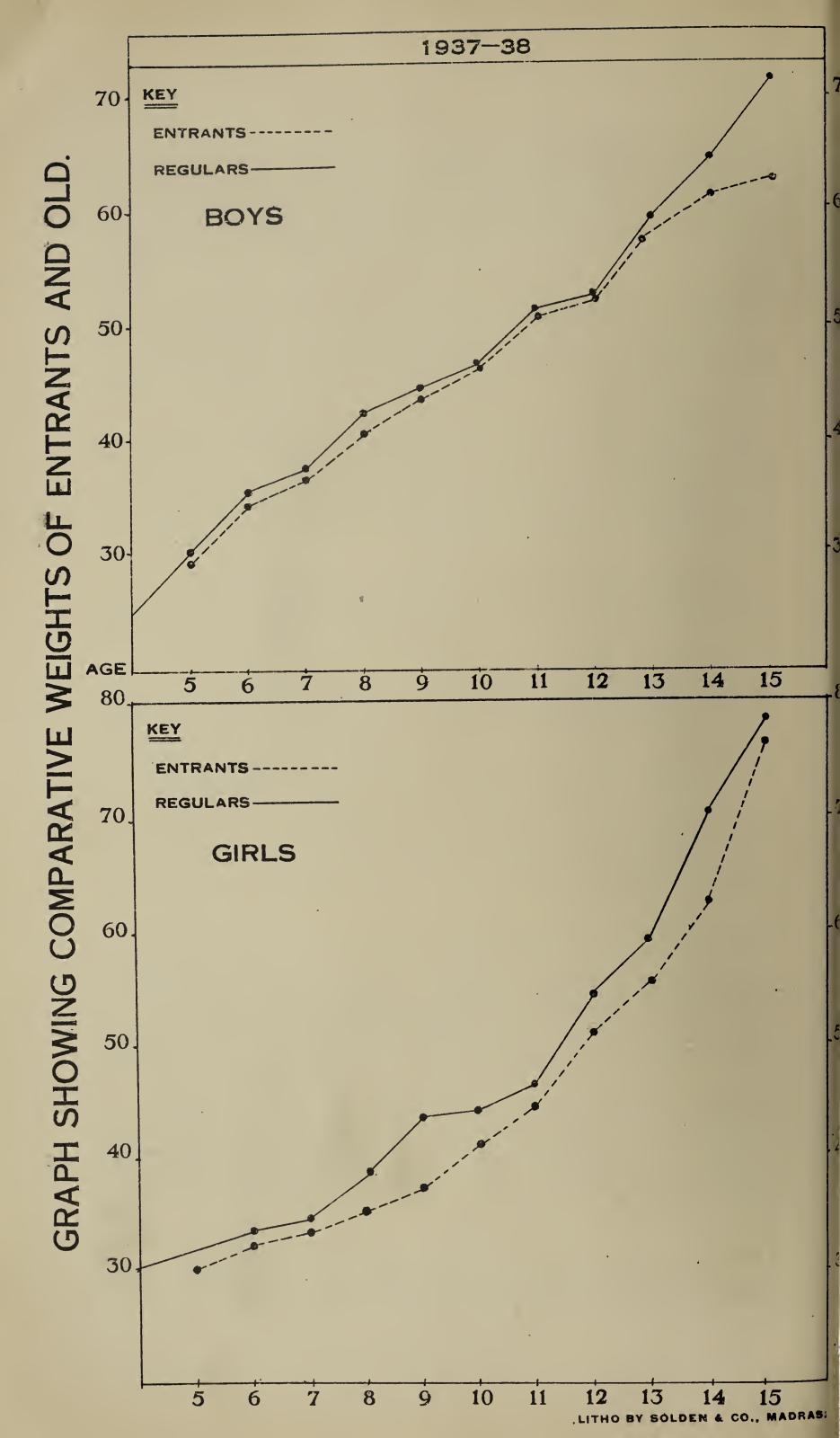
Cleanliness and Condition of scalp, body and nails:—1,306 boys (7·18 per cent) and 502 girls (3·87 per cent) were found to be wanting in cleanliness of person and clothing. The percentages for the previous year were 10·72 among boys and 4·83 among girls. The school staff were frequently reminded of their duty in paying attention to the personal hygiene of the children and such children as were found to be dirty were given baths in the school premises. It is gratifying to note that the number of children requiring such attention is dwindling.

Mal-nutrition:—2,266 boys (12·45 per cent) and 396 girls (3·05 per cent) were under-nourished and required attention. The corresponding percentages in the previous year were 14·33 and 2·60 respectively. As has been explained in the previous reports, under-nourishment was mainly due to lack of balanced diet and vitamins necessary for the proper growth and development of the children. Cod liver oil was supplied to them at the dispensaries and their parents were also advised regarding the necessity for suitable and nourishing food to their children.

Teeth and Mouth:—1,695 boys (9.31 per cent) and 1,050 girls (8.08 per cent) had dental and oral complaints. The percentages of defectives during the previous year were 9.24 among boys and 6.95 among girls. 1,566 children had stomatitis and were treated at the dispensaries. 190 of the children having tartar were advised scaling of tartar at the dental sections of hospitals; 461 were referred to the same sections for extraction of carious teeth.

Nose and Throat:—3,094 boys (17.00 per cent) and 2,510 girls (19.33 per cent) had nasal and throat diseases, the corresponding percentages of defectives for the previous year being 16.82 and 21.34 respectively. 4,436





children had simple enlargement of tonsils without other complications and were treated at the dispensaries. •464 had the same defect with other complications and were advised to have the enlarged tonsils removed early. 431 children had enlarged glands of the neck and 243 had nasal catarrh. Suitable treatment was given to them at the dispensaries.

Eye Diseases:—364 boys (2.00 per cent) and 305 girls (2.35 per cent) had defects and diseases of the eyes. During the previous year, the percentages of defectives were 3.15 amongst boys and 2.88 amongst girls. All the minor complaints of the eyes were treated at the Corporation dispensaries. 144 children had conjunctivitis. 30 of the squinting cases were referred to the Eye Hospital for correcting errors of refraction.

Defective Vision:—94 boys (0.52 per cent) and 10 girls (0.08 per cent) had defects of vision, the corresponding percentages in the previous year being 0.93 for boys and 0.15 for girls. 46 had defects of a minor degree and were advised to take Cod liver oil to improve their general health and thereby have their vision rectified. 58 were referred to the Opthalmic Hospital or the eye sections of other hospitals for correcting errors of refraction.

Ear Diseases:—240 boys (1.32 per cent) and 129 girls (0.99 per cent) had otitis, otorrhoea and other complaints pertaining to the ear. The corresponding percentages during the previous year were 1.59 among boys and 0.75 among girls. 56 children had otitis and 297 were having otorrhoea. Chronic and resistant cases were referred to the specialist for treatment.

Hearing:—5 boys (0.03 per cent) were short of hearing. No girls were defective in hearing during this year. The percentages during the previous year were 0.05 amongst boys and 0.03 amongst girls. Their defects were of the congenital type and hence they were given seats nearest the teachers.

Speech:—33 boys (0.18 per cent) and 2 girls (0.02 per cent) were having defects in speech. The percentages during the previous year under this head were 0.16 among boys and 0.03 among girls. 25 were stammerers and 9 had defects of articulation. One was dumb.

Circulatory System: 94 boys (0.52%) and 26 girls (0.20%) had diseases relating to heart or blood. The corresponding percentages during the previous year were 0.88 among boys and 0.20 among girls. Organic diseases of the heart were detected in 41 children while 18 had functional disorders. 54 had anaemia and were treated at the Corporation dispensaries.

Tuberculosis:—7 boys (0.04%) and 5 girls (0.04%) had signs and symptoms of early tuberculosis of lungs and other organs. The percentages during the previous year were 0.13 and 0.06 respectively. The Medical Inspectors arranged lectures on the subject in the various schools and also had talks with the parents with a view to spread knowledge about this dire disease and impress on them the need for early diagnosis and treatment. All cases of fatigue, want of appetite, wasting, anaemia and irregular temperature were carefully followed up after necessary advice and prescriptions. All the twelve defectives were referred to the Tuberculosis Institute for treatment.

Respiratory Diseases: -236 boys (1.30%) and 117 girls (0.90%) as against 1.41% and 0.74% respectively in the previous year, had bronchitis and other non-tubercular diseases of the lungs. 332 children had bronchitis and 21 were having bronchial asthma. They were treated at the local dispensaries.

Abdominal Organs:—126 boys (0.69%) and 51 girls (0.39%) were found defective under this head. The percentages of defectives under this head during the previous year were 1.55 among boys and 0.43 among girls. Only 49 children were having enlarge I spleen due to malaria. 46 of them were residing in the north range and three in the south range. They have been carefully followed up both by the school staff and the Medical Inspectors. The result of the treatment given to them is shown in the statement on "following-up" work. Cases of inguinal bernia and hydrocele requiring operative treatment were directed to the Government hospitals.

Bones and Joints:—325 boys (1.79) and 32 girls (0.25) haldefects and diseases of the bones and joints. The percentages of defectives during the previous year were 1.91 among boys and 0.19 among girls. 337 children had deformed chest of varying degrees. The details of the defects are shown in the detailed table.

Nervous and Psychic Systems:—15 boys (0.08%) and 3 girls (0.02%) had defects under this head. 0.10% of boys and 0.01% of girls were defective during the previous year. 4 children had infantile palsy while the rest had functional disorders such as epilepsy etc.

Infectious and Contagious Diseases:—1,551 boys (8.52%) and 834 girls (6.42%) had infectious diseases including skin complaints. The corresponding percentages during the previous year were 10.90 and 5.15 respectively. 1.313 children had scabies; 509 children had signs and symptoms of leprosy. Of these 149 were new admissions and the rest were old cases already under treatment. They have been sent to the skin sections of the various hospitals in the city and the Corporation dispensaries. The details of the findings are given under separate head. Cases of eczema and other skin affections while under-going treatment at the local dispensaries, were isolated in the classes and given baths daily.

Other Diseases and Defects:—718 boys (3.95%) and 277 girls (2.13%) had diseases and defects not included in the other times. The percentages of defectives during the previous year were 4.95 among boys and 2.22 among girls. 164 children harboured intestinal worms. 152 had phimosis and were advised circumcision.

Deformities:—17 boys (0.09%) and 21 girls (0.16%) had deformities. During the previous year, the percentages of defectives under this head were 0.10 among boys and 0.11 among girls. The details of deformities have been shown in the table.

Number without marks of Vaccination:—93 boys (0.51 per cent) and 14 girls (0.11 per cent) had no visible marks of vaccination and were subsequently vaccinated.

Medical Treatment:—During the year under report, 13,391 children received medical attention, the details of which are shown in the treatment table. Minor ailments were treated at the dispensary nearest the school, while others requiring institutional or other special treatment were advised to resort to the Government hospitals. During the earlier part of the year, leprous children attended the skin departments of the Government hospitals, the Corporation Skin Clinic, Ice House Road, and the Vyasarpady Dispensary. Subsequently, they were treated at the nearest Corporation dispensaries as arrangements were made to equip all the Corporation dispensaries with necessary drugs and appliances.

Leprosy:--509 children were on the leprosy list during the year under report. 360 were old cases detected previously and 149 were new

admissions. Systematic following up was continued during the year to ensure their regular and continuous attendance at the treatment centres. The parents of all these children were seen and given medical advice and those that had the disease were advised to get themselves treated. In addition, 162 homes of the children were visited to study their environmental conditions and to detect any others afflicted with the disease. 21 such persons were brought under treatment.

A bus was purchased during the year for taking the leprous children to the treatment centres from schools situated at a distance. As a result of this arrangement, the children attended the clinics regularly.

The distribution of the disease according to sex was as follows:

Group.	Number defective.	Percentage to the total examined.	Percentage to the total leprosy cases
Boys Girls	4 24 85	2.33 0.65	83.30 16.70
	509	1.63	100.00

Careful following-up revealed varying results. In two children the symptoms of the disease could not be seen and both were advised discontinuance of treatment. In 32 children improvement was noted after a prolonged course of treatment. 428 children continued treatment at the Corporation dispensaries and the Ice House Road Skin Clinic as they did not show any evidence of improvement. 34 children did not attend the treatment centres. Their parents remained indifferent in spite of repeated advice and persuasion. 12 who left the school after inspection could not be traced. One child was found suffering from leprosy in an infective stage and was excluded from the school.

Re-inspection and Following-up Work:—During the year, 232 re-visits were paid to the schools in addition to routine inspections. 30,628 re-examinations of children were made to note the improvement and change the course of treatment when necessary. Leprous children were kept under observation throughout the year and the parents were invited to the schools frequently for being advised. The details of the results obtained are given below:—

Mal-nutrition:—Of the children who were under-nourished, 27 regained normal health after a course of Cod liver oil and tonics. 1,292 obtained benefit after the course while 833 had to continue treatment as no signs of improvement could be noted.

Teeth and Mouth:—56 children had their carious teeth extracted and 33 had tartar teeth scaled at the dental sections of hospitals. 490 cases of stomatitis were cured and 384 improved after treatment. 3 children had their tongue-tie clipped.

Nose and Throat:—127 had their tonsils removed by operation while 584 were treated at the dispensaries and cured. 1,191 improved after treatment. Two underwent treatment for nasal polypi.

Defective Vision:—3 children had their defective vision corrected after medical advice. 12 improved their vision after taking Cod liver oil.

Tuberculosis:—Out of 9 children who showed signs of pulmonary tuberculosis, three improved after treatment while the rest had to continue treatment as the improvement was slow.

Abdominal Organs:—Fifteen having enlarged spleen due to malaria were cured. In 16, improvement was noted.

Infectious and Contagious Diseases:—948 children having skin conditions as scabies, eczema, fungus, etc., were cured. 314 improved after treatment. The scheme of treatment included instructions on personal hygiene and frequent baths in the school. The results of treatment given to leprous children have already been stated.

Other Diseases and Defects:—79 children underwent operation for phimosis after medical advice. 66 attending the school with fever due to various causes were sent home with suitable advice and medicines and were later found cured.

Co-operation of Parents:—4,860 parents responded to the invitation of the Medical Inspectors to be present during the medical examination of their children. In many cases, the parents themselves asked for and obtained treatment for their ailments.

Co-operation of Teachers:—The school staff continued their co-operation in the work and effectively followed up the treatment given to children. A separate list of the leprous children was also maintained and the treatment given to them was carefully followed. Any slackness was immediately brought to the notice of the Medical Inspectors and the parents were sent for and suitably advised.

School Sanitation:—The Medical Inspectors continued to inspect the school buildings with a view to bring to the notice of the authorities any existing sanitary defect. Four buildings were considered unfit for school purposes and an early change of premises was suggested. In 43 schools, improvements were suggested to rectify defects concerning ventilation, sunlight, etc.

School Latrines:—81 schools had flush-out type of latrines which were generally kept clean. In all other schools in sewered areas, the flush-out type was recommended.

Play-grounds:—57 schools required proper play-ground accommodation and the children had their drill and games indoors.

Water Supply:—All the schools were provided with a sufficient number of taps. Strained tap water was supplied to school children for drinking.

School Equipment:—Every school had adequate and suitable furniture and equipment.

School Baths:—58 schools had bathing rooms. Dirty children utilised them during the recess hours.

Mid-day Meals:—In 84 schools 4,500 children were provided with mid-day meals daily. The school medical officers supervised the arrangements made for the distribution of meals at the schools.

Propaganda:—150 lectures and 142 talks were arranged in the schools. The total attendance at these was 18,644.

REPORT OF THE PORT HEALTH OFFICER ON THE WORKING OF THE QUARANTINE REGULATIONS FOR 1937

In-coming Vessels:—684 vessels arrived here during the year from different ports with 61,290 crew and 59,809 passengers as against 691 vessels with 58,008 crew and 53,337 passengers in the previous year.

Out-going Vessels:—684 vessels with 61,038 crew and 1,00,822 passengers were inspected and granted bills of health during the year under review as against 673 vessels with 58,639 crew and 49,620 passengers in 1936.

Epidemic and Infectious Diseases:—3 cases of chicken-pox and 1 case measles were landed from ships and sent to the Infectious Diseases Hospitals.

Disinfection of bedding and clothing of deck passengers and crew landing and embarking here is carried on at the discretion of the Port Health Officer. The disinfection shed is in charge of a sub-assistant surgeon and a nurse is employed to assist in examining the female passengers.

Rats on Steamers:—No deaths among rats were found on any of the vessels that entered the harbour during the year under report.

PUBLIC HEALTH ACTIVITIES OF AIDED INSTITUTIONS FOR 1937

Ambal Siddha Vaidya Free Dispensary, 2/48 St. Xavier Street, George Town, treated 11,342 patients.

Bairava Free Dispensary, 21 Sundaramurthi Vinayagar Koil Street, Triplicane, treated 48,880 patients and conducted health propaganda work in Tamil.

Chengalraya Naick Free Dispensary, Rundalls Road, Vepery, treated 2,26,575 patients.

Chennai Maignana Dharma Siddha Vaidya Sala, 2/18 Nagappa Iyer Street, Thiruvateeswaranpet, rendered medical aid to 15,208 patients.

Chennapuri Annadhana Samajam, 9 Nyniappa Naick St., Park Town, fed the disable 1 poor, supplied food to 437 boys and provided boarding and lodging to 70 boys studying in various schools and colleges.

Free Unani Dispensary, 31 Hussain Mulk Street, Triplicane, rendered medical aid to 27,036 patients.

Friend-in-need Society, 3 Poonamallee High Road, Vepery, rendered relief to 2360 persons amongst the Europeans and Anglo-Indians.

Kalyani Hospital, Edward Elliots Road, Mylapore, rendered medical aid to 2,846 in-patients and 13,759 out-patients. The number of maternity cases treated was 1,138.

Madras Siddha Ayurvedic Free Dispensa y, Royapettah High Road, Royapettah, treated 22,048 patients.

Oddarpalayam Free Dispensary, 123 Lloyds Road, Mylapore, treated 13,480 patients.

Osmania Shafa Khana, Thayar Saheb Street, Thiruvateeswaranpet, treated 9,633 patients.

Pandit Anandam's Medical Hall, Raghaviah Koa⁴, Thyagarayanagar, treated about 40,000 patients.

Saraswathi Sangam Dharma Oushadalaya, 28 Pidariar Koil Street, George Town, treated 20,923 patients.

Saraswathi Sangam Free Dispensary, Chintadripet, treated 28,124 patients.

Sri Kanyaka Parameswari Devasthanam Dispensary, Anna Pillai Street, George Town, treated 28,176 patinets.

Sri Ramakrishna Mutt Charitable Dispensary, Brodies Road, Mylapore, treated 82,011 patients.

St. Thomas Convent Dispensary, San Thome, treated 25,417 outpatients and 743 in-patients.

Siddananda Free Dispensary, 330 Mint Street, George Town, treated 27,076 patients.

Si ldha Vydia Sanga Dharma Vydia Salai, 61 Mannarsami Koil Street, Royapuram, treated 5,052 patients.

Triplicane Annadhana Samajam, Pilliar Koil Street, Thiruvateeswaranpet, fed 39,978 persons.

Venkatramana Dispensary, Cutcheri Road, Mylapore, treated 49,309, patients. In its branches at George Town, Triplicane and Mambalam 13,925 patients, 4,376 patients and 3,664 patients were respectively treated,

Unani Darush Shifa Free Dispensary, Triplicane High Road, treated 1,16,756 patients.

REPORT OF THE PUBLIC ANALYST FOR THE CITY OF MADRAS FOR 1937.

(1) During the year ending 31st. December, 1937, the number of samples received for analysis under the Madras Prevention of Adulteration Act, 1918, was 1.119 as against 1,039 in the previous year.

Of the 1,119 samples received, 1,094 were analysed and reported upon during the year under report. Report on the remaining 25 samples was pending on 31st. December, 1937. Among the 1,094 samples analysed, 848 samples were found to be genuine and the remaining 246 were certified as adulterated. The percentage of adulterated samples calculated on the total number of samples analysed during the year was 22.5 as against 23.9 during the previous year.

(2) The samples consisted of ghee, butter, milk, gingelly oil, ground-nut oil, cocoanut oil, coffee powder, tea and artificially prepared ghee substitutes. A statement of the samples analysed and the results of analysis during the year under report and the three previous years, namely 1934, 1935 and 1936 is given in Table I in the appendix.

(3) From Table I, it will be seen that 1,094 samples were analysed during the year under report while the corresponding figures for 1934, 1935 and 1936 were 986, 806 and 1,028 respectively. Among the samples examined, the percentage of adulteration was 22.5 during the year under report as against 35.7 in 1934, 32.9 in 1935 and 23.9 in 1936. It will be seen there has been a progressive decrease in the adulteration of the foodstuffs sold in the city.

A perusal of the table would show that since 1934, adulteration of the more important articles of food dealt with has gone down considerably. The degree of adulteration among the adulterated samples has also gone down considerably. In the case of ghee, adulteration now mainly consists of small admixtures scientifically made entailing enormously increased work for the Department in the detection of such scientific adulterations. Most of the adulterated samples of whole-sale and retail merchants being now of this kind, gross adulteration has become almost non-existent with such vendors and is met with only in ghee vended by hawkers. Other articles such as butter, milk etc., have all improved in quality. In salad oils such as gingelly and ground-nut oils adulteration is now almost negligible. If more deterrent fines had been imposed, the situation would have been even better.

(4) One point about butter and ghee requires mention. It is known that butter is largely imported into Madras from outside for making ghee either by the merchants or the consumers. No preservatives are generally added to such butter and in a short time such butter begins to smell very badly due to the decomposition of the proteins contained in it. The ghee prepared from this butter also retains the odour. Most dealers convert all their unsold stock of butter into ghee and hence in addition to bad smelling butter there is a lot of bad smelling ghee also sold in the city. The public generally presume such samples to be adulterated, whereas this need not be the case. Very many bad smelling butter and ghee samples would be genuine and many fresh and good smelling samples might be adulterated.

Samples of butter and ghee with the bad smell above mentioned are highly rancid. The acid value of ghee may be roughly used as a measure of its rancidity and also the decomposition the butter had undergone before being melted into ghee. Though such samples may not contain any admixture of foreign fat, the sale of such butter and ghee should be prohibited in the interest of public health—a measure which would be appreciated very much by the public.

The Government should fix a limit for the acid value of ghee and butter, transgression of which would make the articles liable to be destroyed. All bad smelling butter and ghee should be seized and analysed and, if the fixed limit is exceeded, destroyed without, however, subjecting the vendors to prosecution.

- (5) The nature and extent of adulteration of the various articles dealt with are given below:
 - (i) Ghee: -484 samples were analysed during the year out of which 331 were found to be genuine and 153 were adulterated. The adulterants were almost entirely hydrogenated (hardened) oils and the extent of adulteration ranged from 15 to 95 per cent.
 - (ii) Butter:—122 samples were analysed of which 98 were genuine and 24 were adulterated. Of the 24 adulterated samples, 18 contained water in excess of the prescribed

limit of 20 per cent; 4 samples contained foreign fat (fat not derived from milk or cream) and 2 samples contained both excess water and foreign fat.

(iii) Milk:—80 samples were analysed of which 47 were cow's milk, 30 buffalo's milk and 3 samples were declared as mixtures of cow's and buffalo's milk. Among 47 samples of cow's milk 17 were adulterated, among 30 of buffalo's milk 9 were adulterated and among 3 mixtures of cow's and buffalo's milk one sample proved adulterated. The adulterant in all these cases was added water which varied from 7 to 63 per cent in the different adulterated samples.

No deficiency of fat was noticed in any of the samples.

- (iv) Gingelly Oil:—263 samples were analysed and 24 were found to be adulterated with ground-nut oil, the percentage of adulteration varying from 10 to 90.
 - (v) Ground-nut Oil:—71 samples were analysed and 17 were reported as adulterated. Of these, two were pure gingelly oil, 14 contained gingelly oil ranging from 10 to 90 per cent and one sample contained 40 per cent gingelly oil and 20 per cent cocoanut oil.
- (vi) Cocoanut Oil:—30 samples were analysed and all were genuine.
- (vii) Coffee Powder:—20 samples were analysed and all were genuine.
- (viii) Tea:—13 samples were analysed and all were genuine.
 - (ix) Other Articles:—These included 10 ghee substitutes and 1 coffee substitute prepared from soya beans. One of the ghee substitutes contained 10 per cent ghee and hence declared adulterated as the sale of mixtures of ghee with other fats is prohibited. All the other articles including the coffee substitute were reported as genuine since their descriptions were correct.
- (6) 5 samples of food not taken under the Food Adulteration Act were also analysed during the year. Of these, two were samples of bread-one from the Corporation Zoo and the other from the Infectious Diseases Hospital, Tondiarpet. One of these was of very poor quality and reported as such, while the other was good. Two samples of ghee were analysed on complaints from private individuals. One sample was alleged to contain pieces of lead, probably due to some molten lead falling into the ghee while the container was being soldered. The ghee was entirely free from any dissolved lead but was admixed with 30 per cent of foreign fat. The other ghee sample suspected by the purchaser to be adulterated proved on analysis to be genuine. One butter sample analysed on a similar complaint also proved genuine.
- (7) Table II in the appendix gives a statement of the adulterated samples of 1937 and of the previous year or years dealt with in 1937.

The number of samples received and reported as adulterated during 1937 was 246, out of which convictions were obtained in 131 cases. In the case of 20 samples, the vendors were not prosecuted, but the articles,

having been seized under section 8 of the Food Adulteration Act, were produced before the Magistrates and destroyed as per their orders under section 12 of the Act. The remaining 95 cases were pending disposal on 31–12–1937. Out of 11 samples pending from 1936, 5 proved to be adulterated and certified as such during the year under report. Of the 5 prosecutions launched, 2 ended in convictions and the remaining 3 were pending disposal on 31–12–1937.

94 cases of adulterated samples were pending disposal on 1–1–1937 from the previous year. Of these 94, 76 ended in convictions, 6 were still pending disposal at the end of 1937, 8 cases were withdrawn as parties were not traceable and 2 ended in the acquittal of the vendors. In the remaining two cases no prosecutions were launched.

(8) It will be seen from Table II that the total number of convictions under the Prevention of Adulteration Act, 1918, was 209 as against 218 in the previous year. The total fines levied in 1937 amounted to Rs. 6,210. The corresponding figure for 1936 was Rs. 5,741. The average fine per conviction during 1937 was Rs. 30 as against Rs. 26 during 1936. Though the average fine imposed during 1937 was higher than during 1936, the fines are still far below the deterrent level. Very many of the convictions were for second and subsequent offences, for which the Act has provided a fine upto Rs. 500. But in no case did the fine exceed Rs. 100, the fines being much lower in the majority of cases. Adulteration of foodstuffs cannot be completely suppressed unless the Magistrates realise the importance of sufficiently deterrent fines and impose maximum fines for at least second and subsequent offences.

Before concluding, the Analyst would like to mention that during the year under report, an assistant was appointed who has since been undergoing training in food analysis. When he gets fully trained and when the new laboratory is ready for work, the much desired increase in the out-put of work would be possible.

V. VENKATACHALAM, M.A., A.I.C., Public Analyst.

REPORT OF THE WATER ANALYST FOR 1937

General:

The quality of the city's water supply continued to be the same as in the previous year. The lake water was strained through a thin layer of fine sand to arrest the suspended impurities and was then chlorinated efficiently with an average dose of 10 p.p.m. of chlorine. A "safe" water was thus supplied to the city throughout the year under report.

Though epidemiologically safe, the water supplied was not clear and colourles. It was found to be slightly yellowish and hazy almost throughout the year. A change in the method of filtration as suggested by the Health Officer in his last year's report, (vide page iii) should be effected early for supplying the city with a safe, clear and colcurless water.

The average daily quantity of water filtered during the year amounted to 23.63 million gallons.

Meteorological Notes:

It will be seen from Table No. I that the cold weather period (January and February) was very sunny and fairly windy with an average mean temperature of 77.5 F and with practically no rainfall.

The hot weather period (March, April and May) had nearly the same average hours of bright sunshine and wind velocity as in the cold weather period; but the average temperature was higher. The total rainfall was 2.61 inches as against 1.38 inches during the same period in the previous year.

The south-west monsoon season (June, July, August and September) hal considerably less hours of bright sunshine than during the two previous periods. Wind was also blowing at a moderately high velocity, the average temperature was nearly the same as that of the hot weather period and the total rainfall was 17.64 inches as against 15.61 inches in the previous year for the same period.

In the north-east monsoon season, (October, November and December) the average number of hours of bright sunshine and the temperature were slightly less and the wind velocity slightly greater than during the previous season. The total rainfall during this period was 41.06 inches as against 24.63 inches for same period last year.

Scientific:

Red Hills Lake:— The total rainfall recorded for the year in the lake region was 62.72 inches as against 44.87 inches in the previous year. In November alone the amount of rainfall was 27.33 inches which was more than a third of the total rainfall recorded for the year (Table II).

The lake water was examined three times during the year i.e. in June, November and December. On all these occasions, the lake water was bacteriologically of fair quality (Table III) Chemically it contained a fairly large amount of organic matter of vegetable origin (Table IV).

Raw water, Kilpank end:—The raw water drawn at the Kilpank end of the raw water conduit also was of a fair quality bacteriologically. Lactose fermenters were present in 60 c.c. and upwards in 1.7%; in 20 c.c. and upwards in 5.4%; in 10 c.c. and upwards in 30%; in 5 c.c. and upwards in 44%, and in 1 c.c. and upwards in 19% of the samples examined. The average total colonies per c.c. growing on nutrient agar at 37° C after 48 hours was 811 (Table III).

The chemical characteristics of the raw water were very similar to those found in the previous year, except for a slight increase in the amount of organic matter (Tidy's).

The figures for "ammoniacal N" varied from trace to 0.001 part; for "albuminoid N" from 0.028 to 0.057 part per 100,000 and for oxidisable organic matter from 0.110 part to 0.168 part per 100.00 (Table IV). The figure for oxidisable organic matter was highest in August and lowest in December while the lake level was lowest in September and highest in December (vide graph).

Filtrates from beds:—The method of treatment of the raw water was the same as in last year. The depth of fine sand in each filter was very low and the filters were working with no fixed rate of filtration, so that the chemical and bacteriological results of the filtrates from these beds were very poor. The yearly average percentage of first class samples (L.F. in 60 c.c.) was 22.4; and the average colonies per c.c. was 588 (Table No. III).

Chemically, the figures for "ammoniacal N" varied from trace to 0.004 part; those for "albuminoid N" from 0.024 to 0.044 part; those for

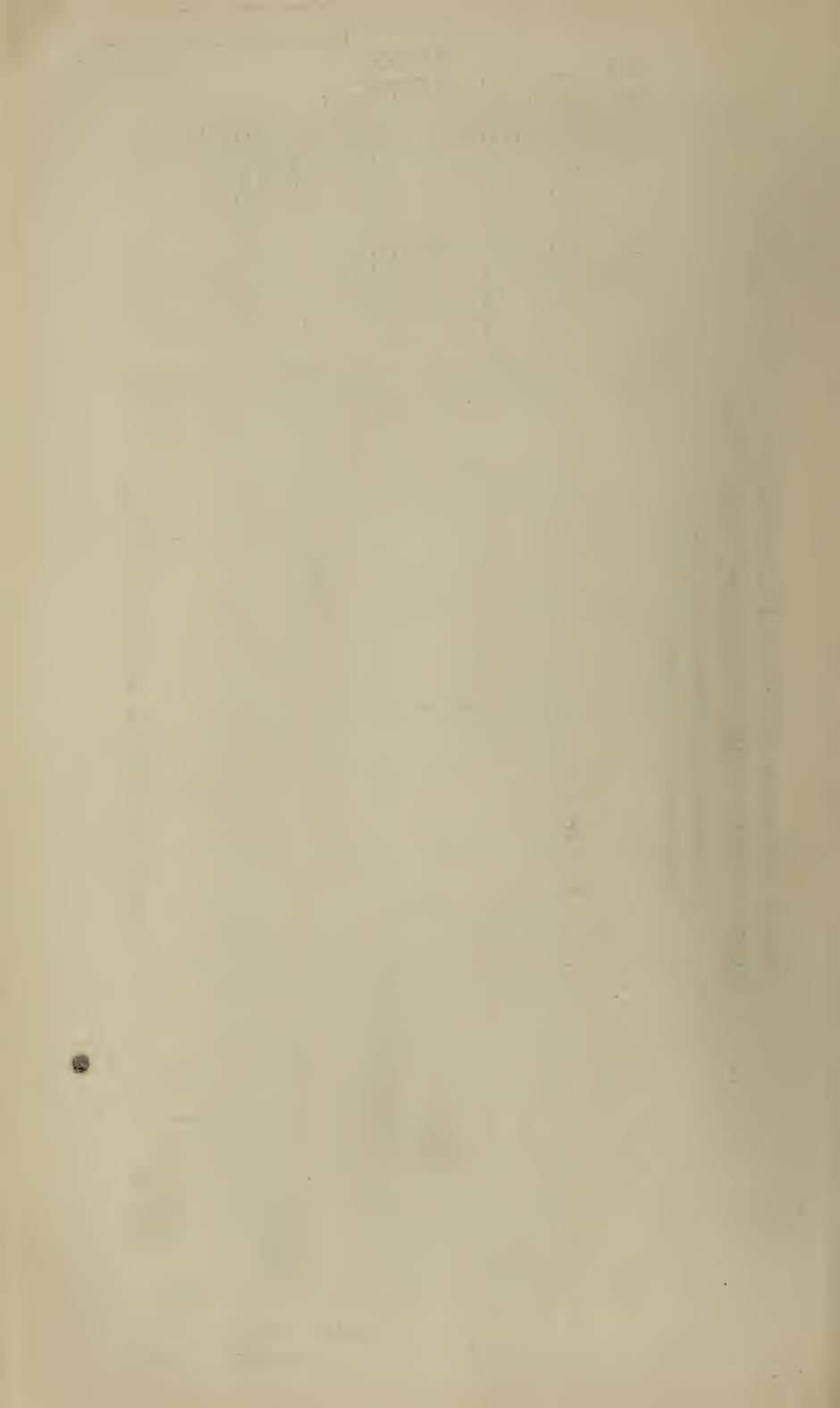
REFERENCE 1937 66.5 .300 66 .290 .280 65 .270 .260 64 250 .240 ABSORBED OXYGEN IN PARTS PER 100,000 63 .230 LAKE LEVEL EXPRESSED IN FEET .220 62 .210 .200 ,190 61 .180 .170 60 .160 59 150 .140 58 .120 57 .110 ,100 .090 56 LITHO BY SOLDEN & CO., MADRAS

GRAPH SHOWING THE RELATION BETWEEN

AND ORGANIC MATT

(ABSORBED OXYGEN FIGURES)

Organio matter



oxidisable organic matter (Tidy's) from 0.072 to 0.139 part per 100,000 (Table No. IV). The annual average percentage of reduction of organic matter over raw water was only 21.9 (Table V).

The dose of chlorine applied to filtered water was 1.0 p. p. m. till August and varied between 0.90 and 1.15 p. p. m. for the rest of the year (Table No. VI).

Test Tap at K.P.S.:—Samples drawn from the test tap at the Kilpauk Pumping Station were examined daily, as these represented the water that was delivered direct into the city mains. The number of first class samples was 90.8% and the average total colonies per c.c. was reduced to 318 (Table III). On the chemical side, all the figures showed a distinct reduction over those of the filtrates from beds (Table IV).

Distribution System:—On the bacteriological side, there was a fall in the number of first class samples (Table III). Chemically, an all-round reduction over the test tap samples was noticed.

Water Works, } 17-6-1938.

S. V. GANAPATI, M. Sc., A. I. C., Water Analyst.

Annual Form No. A: -- Meteorological Data for 1937 -- Madras.

Latitude:-13° 4' North.

Longitude: --80º 15' East.

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ometer.	Dew point.	Mean daily salue.	6.4.9	69.5	71.2	7.4.7	65.1	70.9	79.9	73.5	71.3	65.2	70.5	
Reading of Thermometer.		Mean daily salue.	75.8	78.3	$81.1 \\ 82.9$	0.4.0	6.88 6.88	84.6	84.3	3.08 0.08	6.92	73.9	81.6	
Reading	Dry.	Mean daily range.	4.5.	14.0	15.2	· 0	6.91 0.91	16.3	16.3	12.3	9.6	14.1	14.5	
	D D	muminiM	88.8	71.9	73.8		83.0	78.3	9.2.4	75.0	73.0	67.3	75.5	
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	rths g rs.	Total.		44.8
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7	0001	Excess of b		8.1
9	1001	Mumber of M to every Females	11089933 1089933 10101 10101 10103 1	0.901
	per tion.	Total.		47.8
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	per 1,000 per vious	Total		3 36
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	es.	Total		.5 39.7 38
6	causes.	Females.		
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		All other causes		3 10
		Deaths from child		0.3 0.3 9
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	population from	Diarrhoea.		33
		Other tevers. Lysentery and		3.1
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,	Deaths per 1,000	Malariz.		0.12 0.1
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Annual Form No. II—Statement of Deaths by Divisions during the year 1937.

Total Deaths
Registered during the year. Decemper ual Form No. III — Deaths Registered by Divisions during each month of the year 1937. 2642 November 202 October, 2021 September August. 1911 .vínl 1849]nue: 1979 May. 1759 April. 1857 March. 1859 February. 66 101100 10 ||sunsta Divisions.

ecording to age by divisions during the year 1937.

		-dn pun-	Females.	86 86 87 86 87 87 87 87 87 87 87 87 87 87	2305	236.5
	12	60 years and wards	Males,	88 98 98 98 98 98 98 98 98 98	2336	197.0
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Annual Form No. IX.—Deaths registered from "Plague" - Nil,

Mean ratio per 1000 during the previous five years. 0.013 Total Ratio of deaths per 1000 of population. 0.013 Females. 0.012 Males. Annual Form No. VIII-Deaths registered from "Measles" by divisions during each month of the year 1937. ∞ Total Total. Females. Males. : December. : November. October. September. August. C4 July. တ June. May. April. March. February. January. Total Districts. Divisions.

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Annual Form No. X-Deaths registered from "Malaria" by divisions during each month of the year 1937.

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Annual Form No. XII-Deaths registered from "Other Fevers by Divisions during each month of the Year, 1937.

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Annual Form XIII—Deaths registered from "Dysentery' and Diarrhoea" by divisions during each month of the year 1937.

9	0	gairut	Mean ration 1,000 c previous years,		16
		per lior.	Total,		1.8
ĸ	כ	Ratio of deaths per 1000 of populatior.	Females,		1.7
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4	н	Total,	Females,	88 20 8 20 8 20 8 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	520 11
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Annual form No. XIV—Deaths registered from "Tubercle" including Tubercle of lungs by divisions during each month of the year 1937.

* Deaths in Government Royapuram Hospital, General Hospital and Government Victoria Caste and Gosha Hospital and Government Tuberculosis' Hospital of Patients admitted form moffusil.

9	Zui	Mean ratio previous to years.								
	1000	Total.								1
	deaths	Eemale s.								
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	6	3	Mean ratio 1,000 during previous fir years.		0.4
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Annual Form No. XVI — Deaths registered from "Injuries" by divisions during each month of the year 1937.

*Deaths in Government Royapuram and Government General Hospital of patients admitted from mofussil and destitutes.

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	ns per 1000 delivered.	Total.	20.7 19.5 23.2	3.0 10.5 9.0 9.0 3.3 12.0 13.2 4.0	27.8 10.2 9.2 4.9 7.9	9.4 16.7 3.6 5.5	10.2 7.3 12.9 4.4	21.7 3.2 9.2 1.2 4.0		10.4 10.8 8.0 3.0	0:0
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	Ratio of F	, səleM										19.3
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		Males.	153	117 259 305	259 79 137	53 129 88 140	*74 69 201 201 134	*187 106 288 216 299 186 226 106	*4 210 92 142 166 110 113 97 159 134	*12 117 151 336	145 109 78 91 78	6,576
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63		July.	29	22 51 55	31 9 14	118	15 27 37 36	35 31 31 44 81 81	25 118 118 118 127 129 138 148	18 24 44	20 15 10 8	964
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		March.	21	17 29 42	34 12 25	11 11 27	23 23 39	23 26 18 45 31 12	80 110 80 110 80 120 120 120 120 120 120 120 120 120 12	17 17 44	16 16 8 15 20	882
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* Deaths in Hospitals, of patients admitted from Mofussil.

Annual Form No. XVIII—Deaths Registered from "Other causes" by all divisions during each month of the year 1937.

Annual Form No. XIX-Table of Deaths for 1937 arranged in accordance with the International List (Fourth Revision 1929) as adopted for use in England, Wales, Scotland and Northern Ireland.

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Infections and Parasitic diseases.

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Annual Form No. XIX-Table of Deaths for 1937 arranged in accor ance with the International List (Fourth Revision 1929) as adopted for use in England, Wales, Scotland and Northern Ireland.

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CANCER OF THE MALE GENITO-URINARY ORGANS.	Ca	UNSPECIFIED ORGANS.	E S	Sarcoma of other organs Other tumours of uterus	Tumours of Lung Other Non-Malignant Tumours. Tumours of un-determined	-b Cerebral Tumou	DISEASES OF NUTRITION AND OF ENDOCRINE GLANDS AND OTHER	GENERAL DISEASES. Rheumatic fever	CHRONIC RHEUMATISM OSTEO ARTHRITIS.	(2) Chronic Rheumatism Chronic Rheumatoid Arthritis.	Diabetes
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Annual Form No. XIX-Table of Deaths for 1937 arranged in accordance with the International List (Fourth Revision 1929). as adopted for use in England, Wales, Scotland and Northern Ireland.

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tion Vo.	DIABETES—Contd. Diabetic Carbuncle Diabetic Coma Scurvy Rickets DISEASES OF THE THY- ROID AND PARATHYROID GLANDS.	-a Goitre -d Tetany -1 Amyloid Disease -2 Toxaemia IV. DISEASES OF THE BLOOD AND BLOOD- FORMING ORGANS- ANAEMIA, CHLOROSIS.	Purpura Haemorrhagica Pernicious Anaemia
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LEUKAEMIA, ALEUKAEMIA.	Leukaemia Hodgkin's Disease	DISEASES OF THE SPLEEN.	Enlargement of Spleen	VI. DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS.	Cerebral Abscess Encephalitis Cerebral Meningitis Other Meningitis (not including)	menigococcal meningitis	CEREBRAL HAEMOR- RHAGE, APOPLEXY, ETC.		Heniplegia Paraplegia Infantile Paralysis	of unstat
72-a 72-b			73-2		78-a 778-b 779			82-a-1 82-a-2 82-b-2 82-c-1 82-c-2		

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20122 1段115 533 Total. Annual Form No. XIX-Table of Deaths for 1937 arranged in accordance with the International List (Fourth Revision 1929) 73 December. : m 63 :03 November. • : 53 : --October. : :--September 49 : --as adopted for use in England, Wales, Scotland and Northern Ireland. 50 .deuguA 39 July. 39 June. May. 333 : ∽ . m 36 April. . ⇔ ⊢ 28 March. :--: Rebruary. $\exists \vdash$ 32:03 January. 32 : : : the eye and annexa. Other Diseases of the nervous ISEASES OF THE Epilepsy Infantile convulsions (under OUS SYSTEM OF Diseases of the ear and Causes of Death. Other forms of insanity OTHER FORMS INSANITY. system Fits (age 5 and above) Vertigo mastoid sinus years of age) Melancholia OTHER D Neuraesther NERV Diseases of 84-b Mania Number. Classifica roit 85 88 83 83 87 and sense organ. Mervous system Diseases of the

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VII DISEASES OF THE CIRCULATORY SYSTEM.	Pericarditis Chronic Endocarditis (Valvular Disease) Aortic regurgitation Mitral stenosis	DISEASE OF THE MYOCARDIUM. Myocarditis not distinguished as acute or chronic	DISEASE OF THE CORONARY ARTERIES, ANGINA PECTORIS. Angina Pectoris Coronary Thrombosis CHER DISEASES OF THE HEART.	Auricular Fibrillation -2 Heart Disease (Undefined) Cardiac Asthma Cardiac Dropsy Aneurysm Arterio-Sclerosis Gangrene Cancrum oris Gangrene scrotum
	90 92 92 92 92 92 92 92 92 92 92 92 92 92		26 46	95-b-98

Diseases of the circulatory system.

Annual Form No. XIX-Table of Deaths for 1937 arranged in accordance with the International List (Fourth Revi ion 1929) as adopted for use in England, Wales, Scotland and Northern Ireland.

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Causes of Death.	OTHER DISEASES OF THE ARTERIES.	Other Diseases of the arteries	DISEASES OF THE VEINS.	Haemorrhoids Thrombophlebitis Other Diseases of the Lam.	pahtic system Hyperpiesis Epistaxis Internal Haemorrhag		VIII. DISEASES OF THE RESPIRATORY SYSTEM.	BRONCHITIS.	Acute Bronchitis Chronic Bronchitis Bronchiectasis
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106-c Bronchitis not distinguished as Acute or Chronic 107 Broncho-Pneumonia 108 Lobar-Pneumonia (not otherwise	defined) PLEURISY.	110-1 Empyema 110-2 Other Pleurisy Pneumothorax	CONGESTION AND HAEMORRHAGIC INFARCT OF LUNG, ETC.	111-2 Pulmonary Embolism 112 Asthma 114b-1 Gangrene of the Lung 114b-2 Abscess of Lung Other diseases of the respiratory	IX DISEASES OF THE DIGESTIVE SYSTEM. DISEASES OF THE BUCCAL CAVITY, PHARYNX ETC.	115–1 Diseases of the Teeth and Gums 115–2 Ludwig's Angina 115–3 Diseases of the Tonsils.
system.	Yıotsıi		lo sassa			System.

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Annual Form No.XIX-Table of Deaths for 1937 arranged in accordance with the International List (Fourth Revision 1929) as adopted for use in England and Wales, Scotland and Northern Ireland.

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APPENDICITIS.	Appendicitis Appendicular abscess	HERNIA, INTESTINAL OBSTRUCTION.	Hernia Strangulated Hernia Intestinal obstruction Intussusception Paralytic ileus Volvulus	OTHER DISEASES OF INTESTINES.	Constipation, Intestinal stasis Faecal Fistula Stricture of Rectum Fistula in Ano Haemorrhage of instestine	OTHER DISEASES OF LIVER.	Cirrhosis of the liver Acute yellow Atrophy Abscess of Liver Cholaemia Enlargement of Liver Hepatitis Jaundice
	121		122-a 122-a-1 122-b		123-1 123-3		124 125-1 125-2

Annual Form No. XIX-Table of Deaths for 1937 arranged in accordance with the International List (Fourth Revision1929). as adopted for use in England, Wales, Scotland and Northern Ireland.

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Causes of Death.	OTHER DISEASES OF THE LIVER—Contd. Acute infective Jaundice 127 Cholecystitis	DISEASES OF THE PANCREAS.	128 Acute Pancreatitis	X. NON-VENEREAL DISEASES OF THE GENITO-URINARY SYSTEM AND ANNEXA.	130 Acute nephritis Acute Bright's Disease 131 Chronic nephritis	Chronic Bright's Disease Albuminuria Nephritis not stated to be acu	
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Diseases of the Genito Urinary System.

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OTHER DISEASES OF THE KIDNEY AND ANNEXA.	1	CALCULI OF THF URINARY PASSAGES.	134-a Renal calculus	DISEASES OF THE BLADDER.	Cystitis Retention of Urine Sob Vesico-Vaginal Fistula	DISEASES OF THE URETHRA, URINARY ABSCESS etc.	136-a Stricture of Urethra	DISEASES OF THE PROSTATE.	137 Adenoma of prostate Enlargement of Prostate	DISEASES OF THE MALE GENITAL ORGAN?	138. Abscess of scrotum

Annual Form No. XIX-Table of Deaths for 1937 arranged in accordance with the International List (Fourth Revision 1929) as adopted for use in England, Wales, Scotland and Northern Ireland.

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cation Causes of Death.	DISEASES OF THE FEMALE GENITAL ORGANS. Pyosalpinx Removal of Uterus Salpingitis Dysmenorrhoea and Endometritis	XI. DISEASES OF PREGNANCY, CHILD-BIRTH AND THE PUERPERAL STATE. Septic Abortion (unqualified)	Ta E	144-b Accidental Haemorrhage unqualified) Post-Partum Haemorrhage Retention of Placenta 145 Puerperal Sepsis
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Puerperal State.

Diseases of the skin.

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PUERPERAL ALBUMI NURIA AND CONVULSIONS.	146-1 Eclampsia 146-2 Albuminuria of Pregnancy	OTHER TOXAEMIAS OF PREGNANCY.	147 Anaemia of Pregnancy Hyperemesis Gravidarum Other Toxaemias of pregnancy.	OTHER ACCIDENTS OF CHILD BIRTH.	149 Prolonged Labour Rupture of uterus Other Accidents of Child Birth.	XII. DISEASES OF THE SKIN AND CELLULAR TISSUE.	151 Carbuncle 152-1 Cellulitis 152-2 Acute Abscess and micer	(unqualified) Other Diseases of the	including Elephantiasis (un- qualified)
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Annual Form No. XIX-Table of Deaths for 1937 arranged in accordance with the International List (Fourth Revision 1929) as adopted for use in England, Wales, Scotland and Northern Ireland.

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-	-Glassifi- Gation No.		154 156-a		157-b		157-e(3) 157-e(4) 157-e(5)		158
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Inanition Malnutrition Marasmus Premature Birth.	INJURY AT BIRTE.	Other Injury at Birth	OTHER DISEASES PECU- LIAR TO EARLY INFANCY.	Atelectasis Asphyxia neonatorum. Secondary Asphyxia. Infantile Biliary Cirrhosis. Haemorrhage of New born.		Old age.	XVII. DEATHS FROM VIOLENCE.	Suicide by Arsenic or Drug	Suicide by other solid or liquid Poisonous and Corrosive sub-		Suicide by cutting or piercing Instruments.
159		160		161-a 161-b 161-b	(3)	162°		163		165	

Annual Form No. XIX-Table of Deaths for 1937 arranged in accordance with the International List (Fourth Revision 1929). as adopted for use in England, Wales, Scotland and Northern Ireland.

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	Causes of Death.	SUICIDE BY OTHER MEANS.	Homicide by cutting or Fiercing Instruments	ATTACK BY VENOMOUS ANIMALS.	Snake-bite.	Opium Poisoning. Acci lental Burns.	Gunshot.	ACCIDENTAL INJURY BY FALL, CRUSHING, Etc.	Accidental injury by fall, crushing etc.	Motor Accident Tram car accident	Other Train accidents	Gored by Bull
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	:		~	•		50 00 T 5-	33 -	134	
	•	H & H H				38		113	
	-	: 23 : 23	-	•	4	23 23		2. 159 	
	:	: : : :	b	:	-			321 25	
	:	ㅋㅋ ㅋ . ㅋ		•		40 2		123	
	: :	:::::		•		4-1-4	16	142	
	:	:: ° : :		Н		38 : : 1		22 33 33	
	:	≈ : : :		:		24 :::	120	181 3	
EXCESSIVE HEAT.	Sunstroke OTHER AND UNSTATED FORMS OF ACCIDENTAL VIOLENCE.	194–2 Accidental cranial fracture Accidental fracture of spine Accidental fracture of other bones Other unstated forms of accidental violence Other unstated form of local and	XVIII ILL DEFINED DISEASES.	Sudden death (syncope)	CAUSE OF DEATH UN- STATED OR ILL-DEFINED.	Heart failure Acute Abdomen Anasarca Ascites	Coma Debility (Age 10 to 70) Dropsy Inanition (10 years and over)	Pyrexia of uncertain origin Post-operative shock Surgical Shock Natural causes Unknown	
	191	194-9		199	r,	200-1		200-3	

		al hs.	Ratio per 1,000	34.4	37.9	9.98	\$3.0	36.6	36.3	39.7
rs.	•	Fotal Deaths	Deaths.	22200	24500	28659	24955	23660	23813	25674
previous five years		her ss.	Ratio per 1,000	16.3	16.9	17.7	18.2	17.2	17.3	19.5
ious fi	:	All other causes.	Deaths.	10.0 10564	11.6 10950	11424	11810	11157	11181	12505
prev	hs.	n Id h.	Ratio per 1,000	10.0	11.6	1111	11.4	10.1	10.5	9.3
g the	Deaths	from Child birth.	Deaths.	279	331	313	295	294	302	280
during		Injuries.	Ratio per 1,000	0.4	0.2	0.4	0.3	* ·0	0.4	0.3
aths			Deaths.	267	303	270	198	232	254	10.3 170
year with the deaths	ry	Other Respiratory diseases.	1,000 Ratio per	9 8.5	7 9.2	38.9	4 9-7	0 9.9	5 9.2	
with t	Respiratory diseases.	Re- Re- ta dis	Deaths.	5509	5967	5783	6254	6410	1-44 5985	6676
year	Resp	Tuber- culosis Pulmo- nary.	Ratio per 1,000	7 1.2	5 1.3	1 1.5	2 1.6	0 1.6		5 1.8
the			Deaths.	747	85 55 55	971	0.27 1032	0.19 1010	3 923	0.08 1155
uring	Tuber-	other han Pul. monary.	Ratio per 1,000	0.3	0.3	0.5				0.0
ses du	Tul		1,000 Deaths.	170	156	151	177	126	156	51
Principal diseases	\$	Lysen- tery and Diarrhoea	Ratio per	4-1	0 4.1	3.1	3.6	8 3. 4	0 3.7	3.3
cipal	·	tery Diari	1,000 Deaths.	5 2644	2670	2008	2320	3. 2208	2370	2133
Prin		Other Fevers.	Ratio per	2.5	5 3.2	7 3.2	3.6	9 2.8	37 3.1	86 3.1
f the			Deaths.	1640	2095	2097	0.29 2305	0.25 1799	1987	0.15 2036
the deaths from some of the		Enteric Fever.	Ratio per 1,000	0.3	0.1	0.5			7 0.21	1 0
om sc			Deaths.	101	06	145	0.26 186	0.18 163	0.24137	96 2
ths fr		per per j		0.3	0.5	0.3	-			3 0.1
e deat			1,000.	2 165	1.40	. 193	. 167	. 113	. 156	1,8
		Plague.	Ratio per	1 0.002	•	:	<u>.</u>	<u>.</u>	:	
Comparing			L,000.			:	:	<u></u>	: 	:
Com		Measles.	Deaths. I,000	16 0.02	44 0.07	7 0.01	10.0 2	5 0.01	16 0.02	8 0.01
-XX			Ratio per 1,000				60.0		0.38	1
No.		Small-pox.	Deaths. Ratio per	6 0.3	7 1.3	1 0.2	59 0.	3 0.005		90.3
Form			Ratio per 1,000	12	1 83		0.52 5	0.22	0.16	0.36 19
Annual Form		Cholera.	Deaths. Ratio per	5 0.003	62 0.1	99				
Anı		17-0			991 1	145	3 140	of st 5 104	7 438	
	Years.		1932	1933	1934	1935	1936	Mean of the last 5 years.	1937	

TABLE A.

Comparative Statement of deaths from some of the principal diseases during the past 12 years.

ls.	diai Birth	1105	1258	1321	1281	1260	1318	1326	1380	1378	1414	1415	1400
en een years.	Death-rate.	100.0	92.3	118.0	94.0	88.1	50.3	48.2	67.7	63.4	71.3	65.0	74.9
Children between 1 and 5 ye	Deaths.	4120	3806	4864	3875	3633	3767	3609	4154	3893	4380	3990	4611
1	Death-rate.	279.3	237.6	286.8	256.6	243.9	248.3	236.5	264.4	228.2	223.0	216.2	220.8
Infantile mortality under 1 year	Deaths.	6145	2888	9089	5933	6258	6391	6622	7540	6.124	6948	6218	6836
tory es.	Death-rate.	12.2	12.9	16.4	12.7	15.0	8.9	8.5	9.5	9.01	9.11	11.7	19.1
Respiratory diseases.	Deaths.	6470	6816	8691	6695	6331	5743	5509	2967	6905	7463	7546	7831
tery oca.	Death-rate.	7.3	6.5	7.4	5.0	5.8	4.5	4.1	4.1	3.1	9.8	3.4	3.3
Dysentery and Diarrhoea.	Deaths	3867	3268	3931	3127	3056	2746	2644	2670	2008	2320	2208	2133
Plague.	Death-rate.	:	÷	:	:	:	:	0.003	:	:	:	:	
Pla	Deaths			::	:			2	· · · ·	::	6.	:	
ous ces	Death-rate		:	2.0	1.2	0.8	2.1	2.5	0.8	1 -8	,	6.0	8.0
Other infectious diseases	Deaths.	565	:	1052	612	411	1347	1403	519	1163	607	601	518
	Death-rate.	2.7	2.1	3.2	3.5	3.9	3.0	2.7		3.4	3.89	2.8	3.1
Other Fevers.	Deaths.	1343	1259	1732	1861	2097	1914	1747	2185	2242	2491	1799	2036
a.	Desth-rate.	2.6	5.6	3.0	F:3	0.2	4.0	0.3	0.3	ତ.ଡ	167 0.26	1130.18	780.12
Malaria.	Deaths.	1342	1367	1599	681	283	277	165	140	193	167	113	78
	Death-rate.	0.1	90.0	0.2	0.1	0.4	0.04	0.3	6.1	0.5	60.0	.005	0.3
Small Pox.	Deaths	09	32	251	506	183	24	176	137	131	59	က	196
era.	Death-rate.	0.5	1.0	1.3	0.03	0.08	0.5	0.08	0.1	0.3	0.55	0.25	0.36
Cholera.	Deaths.	5.8	512	802	16		153	ಬ	62	991	145	140	232
	Death-rate	45.0	42.3	50.2	42.4	4.3.2	33.8	34.4	37-9	98 6	38.6	36.6	39.7
Deaths.	No. of deaths Registered exculsive of still births.	23,776	22,364	26,715	22,415	22,839	23,162	22,290	24,500	23,659	24,955	23,660	25,674
	Bitrth rate.	41.8	46.8	44.9	43.7	48.5	39.8	43.3	44.1	43.5	47.9	45.1	47.8
Births.	No. of Births Registered exclusive of Still births.	22,000	24,760	28,729	13,124	25,662	25,738	27,996	28,533	28,149	31,031	29,189	30,958
	Year.	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1836	1937

TABLE B.

Rainfall.

	-									-
	Total.	,	Inches.	46.59	40.18	36.66	40.34	44.25	61.38	
	4th Quarter. October	to December.	Inches.	36.31	30.58	20.87	24.28	24.63	41.06	
	3rd Quarter. July	to September.	Inches.	7.28	5.20	11.20	14.26	12.39	15.53	
Ivailliall.	2nd Quarter. April	June.	Inches.	2.31	86.0	2.54	1.23	3.53	4.72	
	1st Quarter. January	March.	Inches.	0.69	3.42	2.05	0.57	3.70	0.07	
				:	:	:	:	:		
	Years.			:	į	:	:	•	:	-
				1932	1933	1934	1935	1936	1.937	

TABLE C.

Births, Deaths and Infantile Death-rates for different communities in the city of Madras for 1936 and 1937 Table of

	1	{						1 1
	Infantile Death Rate.	63.8	100.5	240.0	210.7	0.295	* :	216.5
	Infantile Deaths.	က	& &	342	5,102	893	•	6,318
1936	Death Rate.	6.1	22.6	27.0	37.6	39.5	1.7	36.6
	Total No. of Deaths.	55	241	1077	1,9551	2764	ಌ	23,660
	Birth Rate.	13.1	35.5	35.8	46.6	44.6	0.9	45.1
	Total No. of Births.	47	378	1425	24,218	3,120	, 	29,189
	Infantile Death Rate.	57.1	119.8	194.4	220.9	244.2	:	220•8
	Infantile Deaths.	. 67	46	304	5,659	818	7	6836
1937	Death Rate.	5.0	23.8	28.2	40.9	43.0	1.0	2.63
. 19	Total No. of Deaths.	18	253	1,124	21,265	3,011	ಣ	25,674
	Birth Rate.	%	36.0	39.2	49.3	48.0	1.7	47.8
	Total No. of Births.	35	384	1,564	25,620	3,350	ນ	30,958
cord-	Population ac serion ac serion and the serion in 1881	3,581	10,657	39,884	5,20,176	70,031	2,901	6,47,230
		•	:	:	•	:	:	
	caste.							Total
	Race or caste.	Europeans.	Anglo-Indians	Indian Christians	Hindus	Mohamedans	Others	

TABLE D.

Table of Birth and Death rates of principal sub-divisions of Hindu Community for 1936 and 1937.

			1937.	37.			1936,	6.	of British Delication of Time - the description
Name of Community.	Population.	Total Births,	Birth Rate.	Total Deaths.	Death Rate.	Total Births.	Birth Rate.	Total Deaths.	Death Rate.
Brahmins	58,761	2,126	36.2	1,219	20.7	2,138	36.4	1,278	8-12
Chetties	37,949	1,814	47.8	1,646	43.4	1,671	44.0	1,204	31.7
Vellala or Mudaliars	86,716	4,122	47.5	:3,194	36.8	3,161	36.5	2,751	31.7
Balija or Naidus	60,263	2,522	41.8	2,227	36.9	2,167	35.9	1,878	31.2
Vannia or Naickers	69,650	4,033	57.9	3,121	44.8	3,336	47.9	2,914	41.8
Adi-Dravidas	73,701	3,910	53.1	3,627	49.2	3,390	46.0	3,453	46.9
Patnavars .	11,309	342	30.5	275	24.3	748	66.1	478	42.3
Yadaval or Idayars	17,022	852	20.0	622	36 5	1,077	63.3	866	58.6
Viswakarma Brahmins or Kammalars	15,670	034	20.4	009	38°3	848	54·1	737	47.0
	-		-						

TABLE E.

Table of Birth, Death and Infantile Death rates by months for 1936 and 1937

					1	1							
					1937					1	1936		
Months.		Total No. of Births.	Birth Rate.	Total No. of Deaths:	Death Rate.	Infantile Deaths.	Infantile Deaths on 1000 live Births.	Total No. of Births.	Birth Rate.	Total No. of Deaths.	Death Rate.	Infantile Deaths.	Infantile Death-rate on 1000 live Births.
January	:	2137	39.68	2338	43.3	604	282.6	2114	39.2	1967	36.5	498	235,6
February	:	1865	34.6	1859	34.4	3.61	247.2	1820	33.7	1775	32.9	417	229.1
March	:	2245	41.6	1857	34.4	481	214.2	2051	38.0	1841	34.1	453	8-022
April	:	2686	8.64	1759	32.6	460	171.3	2176	43.0	1783	33.0	449	206.3
Мау	:	2542	47.1	1979	36.7	570	224.2	2376	44.1	1822	33.8	490	206.2
June	:	2540	47.1	1849	34.3	486	191.3	2195	40.7	1912	35.4	481	218.9
July	:	2600	48.2	1911	35.4	519	199.6	2452	45.5	2008	37.2	592	241.4
August	:	2685	49.8	2 14	89.2	601	223.8	2671	49.5	2020	37.4	566	211.9
September	:	2760	51.2	2021	37.5	565	204.7	2920	54.1	1786	33.1	517	177.0
October	:	2807	52.0	2025	37.5	531	189.1	2818	52.3	1824	33.8	499	177.1
November	:	2759	51.2	2642	48.9	681	246.8	2699	20.0	1948	36.1	558	206.7
December	:	3332	62.0	3320	61.5	877	263.2	2897	53.7	2974	54.5	798	275.4
Total	:	30958	47.8	25674	39.7	6836	220.8	29189	45.1	23660	36.6	6318	216.5

TABLE F.

Ratio of deaths among Children under one year of age per 1000
Live Births registered in each division for 1936 and 1937.

	193	37	. 19	936
Divisions.	Infantile Mortality.	Infantile Death-rates.	Infantile Mortality.	Infantile Death-rates.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40	155 126 297 306 303 98 145 52 134 106 156 69 267 217 91 126 306 232 355 187 163 86 208 108 117 103 173 205 173 138 165 373 141 174 73 100 81	267·7 204·6 202·7 232·6 240·1 257·2 187·4 166·1 201·2 279·7 209·1 235·5 246·5 286·0 279·1 310·3 240·5 242·2 251·1 223·1 195·9 156·3 236·1 195·3 217·4 212·2 169·0 188·4 237·9 209·4 205·4 179·8 213·9 224·5 222·3 201·1 227·2 157·3 198·8 243·3	236 270 303 307 105 82 103 55 159 183 48 212 195 36 160 487 314 226 173 267 211 197 247 293 155 188 225 312 376 193 	265·8 197·5 212·6 221·3 283·8 173·0 190.4 263·2 187·9 238·3 247·4 224·6 295·9 279·1 248·8 238·0 226·2 205·0 204.3 167·2 210.6 182·1 197·4 196·4 180·1 235·0 253·4 222·6 215·9
Total	6,836	220.8	6,318	216.5

Table of Infantile Mortality by months in the year 1937.

4.0		Total of 1936.	498	417	453	449	490	481	592	566	517	499	558	864	6318
	7.	Total.	409	461	481	460	570	486	519	601	565	531	681	877	6836
	Total of 1937.	Females.	275	212	230	. 500	255	237	20.8	291	284	246	292	395	3135
	T_0	Males.	329	249	251	260	315	249	301	310	281	285	389	482	3701
	*səsna	All other ca	50	63	38	. 59	87	61	111	137	.14	103	154	223	1200
	-s√s ≀	Respiratory	172	138	157	114	183	159	08:	188	154	148	186	221	200ū
	*wəşs	Nervous sy	51	37	46	44	50	43	40	40	51	44	28	64	568
		Debility.	G	4	Ľ*	က	C 3	٠ <u>٠</u>	4	<u>م</u>	12	-	6:	14	95
	Birth	Prematu r e	241	174.	173	189	153	147	121	140	165	183	207	268	2161
		Dysentery Diarrhoea	38	25	35	98	65	47	829	59	45	31	35	61	505
	* S.	Other fever	43	20	23	22	28	24	22	24	23	14	22	22	287
		Malaria.	:	:	-	2	:	:	:	:	:	:	:	:	ုဘ
		Measles.	•	:	:	:	:	:	23	:	:	:	•	:	2
		Small-pox.	:	:	 !		23	:	H	4	-	-	•	4	15
				•	•	:	:	:	:	:	:	:	:	:	÷
		1937.	:	:	:	*	:	:	•	•	:	:	:	:	Total.
			January	February	March	April	Мау	June	July	August	September	October	November	December	

TABLE H.

Table of percentage of Infantile Deaths from Principal causes in the year 1937.

Ī		oitsA	21.7	14.9	20.2	16.9	15.5	10.8	
3.00	Total.	Total.	1484	1021	1384	1158	1051	738	6836
	.causes.	.oiteA	10.6	15.9	21.03	16.4	16.7	30.3	17.6
-	All other	Total.	157	163	291	191	174	224	1200
-	System.	.oiteA	1.01	6.2	31.6	50.3	50 8.8	42.4	29.3
	Respiratory	Total.	15	63	440	583	586	313	2000
	System.	.oiteA	3.9		13.3	11.4	8.4	6.9	8.3
100	Nervous	Total.	58	54	184	132	88	51	568
-		.oitsA	∞.	1.2	2.7	2.3	್	ν.	1.4
	Debility.	Total.	12	12	37	27	က	4	95
	Birth.	.oitsA	82,1	9.99	18.2	ά		1	31.6
	Premature	Total.	1219	681	252	ō	:	-	2161
	and Dysentery.	.oiteA	,i	3.13	7.6	12.0	11.9	11.9	7.4
	Diarrhoea	Total.	16	32	105	139	125	88	505
	Fevers.	Ratio.	4.	1.6	5	6.4	6.2	7.9	4.5
	Other	Total.	2	16	20	02	99	58	287
		Ratio.	:	:	Н.	:	ċ ₂	:	.04
	Malaria.	Total.	• :	:		:	∾	:	က
		Ratio.	•	:	:	:	2.	:	.02
	Measles.	Total.		:	:	:	20	:	2
	Small-pox.	Ratio.	:		က	9.	4	:	ଦ୍ୟ
		Total.	•	:	4	ı~	4	:	15
	Age Periods.		Under 7 days	7 days and under 1 month	4 months and under	4 months and under 7 months	7 months and under 10 months	10 months and under 1 year.	Total

VACCINATION.

Statement showing the number of births (Divisional and Hospital) verified during the calendar year 1937 and the number of Infants vaccinated under one year of age.

7 2			•		unde	er one	year o	i age.	9	\$		
	Total excludi- birt		Still	births.	u	eaths nder year.	in	nber of fants	fants ted u	ber of in vaccina nder on ear.	vacci	ntage of nation to registered.
Divisions.	Divisional.	Hospital.	Divisional.	Hospital.	Divisional,	Hospital.	Divisional.	Hospital.	Divisional.	Hospital.	Divisional.	Hospital.
								,				
1	734	268	12	15	66	40	668	228	382	69	52.0	25.7
2	473	295	5	8	41	24	43 2	27,1	223	97	47.2	32.8
3	796	655	20	90	122	63	674	592	382	106	48.3	16.2
4	750	570	32	35	115	85	635	485	467	382	62.2	67.0
5	800	475	20	24	112	75	688	400	577.	318	72.1	66.9
6	281	74	2	• • •	47	13	234	61	58	9	20.6	12.2
7	583	182	18	19	93	27	490	155	295	70	50.6	38.5
8	195	99		1	24	18	171	81	90	22	46.2	22.2
9	353	243	3	12	41	25	312	218	158	78	44 ·8	32.1
10	269	118	3	10	42	20	227	98	95	22	35.3	18.6
11	479	271	9	21	66	45	413	226	219	76	45.7	28.0
12	188	60	6	4	35	6	153	54	67	17	35.6	28.3
13	740	297	15	32	146	49	594	248	365	91	49.3	30.6
14	520	231	8	12	93	43	427	188	271	54	52·1	23.8
15	218	128	2	4	41	12	177	116	69	28	31.6	21.
16	3 31	125	5	7	59	26	272	99	135	29	40.8	23.2
17	1027	212	12	23	130	30	897	182	514	5 6	50.1	26.4
18	722	211	8	18	118	40	604	171	374	76	51.8	36.0
19	1106	315	17	30	172	56	934	259	660	109	59.7	34.6
20	586	219	11	14	105	47	481	172	378	94	64:5	42.8
-21	5 99	239	1.4	22	86	24	513	215	356	113	59.4	47.3
22	272	346	12	28	35	36	237	310	157	95	57.7	27· 5
23	543	356	23	13	79	54	464	302	333	199	61.3	55.9
24	267	224	12	4	38	29	229	195	121	72	45.3	32.1
25	512	380	14	18	54	47	458	333	308	110	60.2	29.0
-26	429	466	3	18	74	68	355	398	126	167	29.4	35.8
27	156	656	2	79	24	59	132	607	69	68	44.2	10.2
28	351	254	7	8	42	34	309	220	229	121	65.2	47.6
2 9	297	136	•••	6	48	30	249	106	191	40	64.3	29.4
0	646	165	27	10	103	38	543	127	266	77	41.2	46.7
· 3 1	615	330	39	19	148	30	467	300	241	109	39.2	33.0
32	432	405	11	37	71	58	361	347	308	86	71.3	21.2
-33	407	208	22	11	51	23	356	185	270	105	66.3	50.5
34	525	190	16	10	91	53	434	137	275	101	52.3	53.2
35	975	605	24 15	70	75	29 36	900	57 6	5 38 269	216	55.2	35.6
36	566	293	15	24		20		257		123	47.5	42.0
37	422	129	13	27	59	14	363 302	109 88	19 5 185	40 21	46.2	31.0
38	322	102 138	12 .9	10	57	26	331	112	203	66	57·5	20.6
39	388 264	101	. 9	10 17	62	20	202	81	99	33	52·3 37·5	47.8
40	204	101		11		20	202	01			0,0	32.7
Total	20139	10781	491	820	2962	1472	17177	9309	10518	3765	52.2	34.9

VACCINATION: Statement Showing particulars

Districts.
1
1

of Vaccination during the calendar year 1937.

Vaccina ———— Successf					Re-Va	accinati	ons.	Percent successf in which sults know	tage of ul cases of the re- were wn.	vaccinated per	annual of pe succes vacci durir	erage number ersons essfully nated ig the	ani nur of d fro smal	rage nual mber leaths om l-pox	ch
Under one year.	One year and under six years.	Six years and above.	Total.	Uaknown.	Total.	Successful.	Unknown.	Primary.	Re-Vaccinations.	Persons successfully 1000 of population	Number.	Ratio per 1000 of population.	Number:	Ratio per 1000 of population.	Average cost of vaccination.
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
375 441 720 643 698 116 496 213 341 302 451 113 642 492 224 245 816 588 1003 526 574 370 1074 248 605 582 242 430 371 422 532 430 501 457 760 496 398 307 247 178	389 333 371 471 398 113 292 141 271 162 259 121 472 227 128 132 518 400 258 152 106 98 126 105 201 153 105 102 168 169 168 167 168 206 302 242 335 198 157 223 194 155	11 12 14 19 17 8 5 3 1 2 4 16 13 14 2 18 4 6 3	775 786 1105 133 113 237 793 357 613 466 710 234 1118 719 353 377 1334 988 1267 689 683 469 1200 354 811 738 349 532 39 605 713 650 805 717 1095 694 559 534 447 336	2 11 13 2 2 1 1 1 7 26 6 69 1 1	1084 1565 850 736 1086 1636 353 9645 583 1090 646 702 2783 3737 1004 787 889 1051 839 1149 1288 779 2703 2171 263 215 228 2448 594 732 635 1875 944 579 1878 390 664 566 656 235	109 196 125 108 135 13 41 55 107 131 121 101 312 551 108 104 3 123 189 368 126 180 359 49 503 58 73 54 65 53 343 115 31 29 76 20	755 1007 598 142 297 108 113 9236 308 1128 452 236 53 19 3 932 92 82 94 881 97 1 2 260 68 56 99 46	100·0 100·0 100·0 100·0 99·8 100·0	33·1 35·1 82·2 18·2 17·2 0·9 17·1 13·4 18·2 16·7 18·8 0·4 14·7 16·4 20·8 16·2 6·7 29·0 48·6 29·3 36·6 32·1 11·7 10·0 8·5 4·0 0·6 9·2 18·2 29·5 5·1 13·6 10.6						0-14-1
18669	9119	209,	27997	146	5 2058	5261	17165	99.8	15.1	51.4	36304	56.1	241	0.3	

VACCINATION.

Statement showing the number of births verified in 1937 and the number of infants vaccinated under one year of age.

		90				f	. ,
Number of children in column 5 whose vaccination was postpored beyond one year of age for mcdical reasons.	&	1.568	579	1,183	524	1,481	724
Percentage of column 6 to column 5	7	77.3	8.09	80.1	61.7	78.4	59.0
Number of children in column 5 who were vaccinated before they attained the age of one year.	9	10.193	2,955	9,980	3,136	10,518	3,765
Number of children in column 2 who were available for vaccination (column 2 minus columns 3 and 4).	rO	13	4,858	12,464	5,083	13,422	6,408
Number of children in column 2 who left the city before attaining the age of one year without being vaccinated.	4	3 699	2,878	3,830	3,528	3,755	2,901
Number of children in column 2 who died before attaining the age of one year without being vaccinated.	က	9.741	1,254	2,845	1,248	2,962	1,472
Total number of Births excluding still Births.	67	10.69.8	8,990	19,139	9,859	20,139	10,781
			: :	•	:	:	<u>.</u>
Year.	1		Hospital	(Divisional	Hospital	f Divisional	Hospital
			1935	000	1950	1001	1661

Statement showing the areas in the City which have been sewered and are yet to be sewered.

Old Divisions.	Name of Areas.	Length of Sewers in feet laid feet laid	Length of Sewers in feet laid up to 31-12-1937	centag Sewere tions	Percentage yet to be Sewered	Remarks.
28 29	Chintadripet Thiruwateeswaranpet Chepauk Triplicane Amir Mahal Mirsahibpet Royapettah	1,080 4,816 303 2,116 797 1,171 834 1,348 11,233 9,624 2,850 895 1,550 1,497 1,193	42,696 38,975 57,283 30,459 30,771 27,001 35,920 23,345 27,687 29,305 18,379 33,171 10,586 21,534 36,495 42,246 54,659 44,337 98,338 53,076 66,396 41,605 55,842 22,506 29,713 28,768 96,998 83,648 94,915	94 97 92 100 100 100 100 99 97 90 95 66 68 99 85 96 70 50 87 90 91 89 87 97 81 92	12 23 3 3 27 6 3 8 8 8 10 5 34 32 1 15 4 30 50 13 10 9 11 13 3 19 8	
	Total .	41,307	13,08,825	88.23	11.77	141 - 2 2011 / 60

Statement showing the number of applications relating to licences disposed of during 1937.

No.	Description.		Number of cases dealt with	Number sanctioned	Number refused.	Number pending.	Remarks.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38	Aerated Water Factory Bakery, Sweetmeat Bazaars, Coffee Hotels Candles and Soaps Cocoanut fibre, Flax, Hemp and Jute Cattle Yards Bones, Hoofs, Hairs, Wool and Horns Cart stand Dairy Produce Flour Guilding, Condiment Hack-stable Dyeing Onions and Garlic Oil, Oil Mills Lodging Houses Markets Meat Spirits, Turpentine and Chemical Rosin Laundries Fish, Fins Skins, Hides and Leather Paddy Boiling Sugar Catgut, Offal, Tallow Snuff Cotton Eating Houses Swine Lime-kilns Beedy Manufacturing Manufacturing of Cigar or Cigarettes, Storage Tobacco Camphor—storage and Boiling Shaving Saloons Husking of Paddy Groundnut Storage Grain storage Gold refining Poultry	of	463 27 34 2,290 7 14 480 135 201 49 72 76 490 112 47 284 164 147 21 122 1 4 76 32 1,041 17 20 	41 458 27 34 2,064 7 14 478 115 186 49 67 76 472 107 47 156 162 147 19 121 1 4 73 32 817 8 	1 5 20 2 20 15 8 4 123 2 2 1 3 42 17 12	206 206 10 1 5	
			6,488	5,801	283	404	

Statement of cases treated in the Corporation Dispensaries during 1936 and 1937.

Serial No.	Name of the Dispensary.	The Year in which the Dispensary was opened.		o. of cases ated.	oper	No. of ations ormed.	Remarks.
Se		The who Disp	1936.	1937.	1936.	1937.	L
1	Royapuram Dispensary	1924	91,069	91,410	211	197	
2	Washermanpet ,,	1913	1,36,462	1,35,367	832	683	
3	Harbour ,,	1929	1,58,900	1,70,504	249	364	
4	Mannady "	1923	65,470	58,473	225	172	
5	Mafuskhan "G.T	1923	88,416	90,150	3 5 5	268	
6	Mint Street ,,	1923	1,45,666	1,49,207	306	4 81	
7	Trevelyan Basin "G.T	1919	1,50,760	1,45,770	386	5 69	
8	Perambore ,,	1928	5 3,6 5 5	60,827	24 7	135	
9	Vyasarpady ,,	1929	59,214	63,025	4 ,36 3	3,708	
10	Kosapet ", …	1929	70,503	82,484	838	1,047	
11	Baliah Naidu "	1,99	1,40,925	1,38,912	1,152	7 76	
12	Kilpauk " …	1919	1,18,007	1,11,155	1,080	677	
13	Nungambakkam "	1923	84,300	84,961	156	137	
14	Chintadripet "	1909	1,3 6 ,636	1,89,444	682	605	
15	Pudupakkam "	1924	1,01,983	1,12,817	54 1	732	
16	Triplicane " …	1918	61,657	64,507	5 31	580	
17	Teynampet ,,	1921	53,607	56,945	4 3 5	44 5	
18	Thyagarayanagar " (shifted from Pulianthope)	1922	53,747	68,416	115	151	
19	Mylapore " …	1924	1,88,765	1,68,980	510	659	
20	Unani Dispensary, Pulian- thope (shifted from Thyagaraya- nagar)	1930	74,478	63,173	101	134	
21	Siddha Dispensary, Chulai	1931	1,34,751	1,41,154	15 9	155	3
22	Ayurvedic Dispensary, Thousand Lights	1 9 30	74,618	76,620	194	484	
23	Unani Dispensary, Thayar Sahib Street	1932	1,09,875	97,481	184	94	
24	C.W.C. Dispensary, Perambore	19 36		55,326		52 3	

Statement of notices issued and disposed of together with

-	A DEATH TOUR LOS THOUSANTED CO		चे न्हें हें ह		otice		7 (1.14 o 9)	ſ
	The second section of the control of	*** ** ********		***	· ~		an unlied with	
Section or By-law.	Substance of Section or By-Law.	No. pending on 1st ranuary 1937.	No, issued during the year.	rotal.	Voluntarily.	By prosecution, S	By transfer to W. D. ifor Departmental execution and recovery of cost.	No. cancelled.
(1)	(2)	(3)	(4)	(5)	7,1		(as a sed (6) s of Z 1	(7)
177 178 (4)	Control over house drains privies and cesspools Occupying or a lowing occupation or house without proper drainage			2	2		* Kg. a. As 1.5113 Y	•••
186	Failure to obey requisition to provide latrine or to remove latrine to another site and failure to keep them clean and proper order	218	794	1012	486	199		85
188	Failure to obey requisition to provide latrines for Market etc., or to keep them clean (%) (/			1	1		(aithean a)	
189	Failure to construct latrines so as to screen persons using them from view Keeping rubbish or filth for more than 24	1		1	1	•••	•••	•••
202 (4) 202 (5)	hours etc. Prohibition against allowing sewage to flow in	1 7]	1	1	•••	ទី ផទី ពីប្រា ***	•••
260	Failure to obey requisition to repair, etc. tank or other place dangerous to passers by or persons	4	1	4	. 4	••.•	B B rawn 207 T	•••
264	living in neighbourhood Failure to obey requisition to fill up, etc, tank or	ĺ		1	1		Damas S	•••
269	well, or drain of water, etc. [442] 1 Failure to obey requisition to enclose, clear or cleanse untenanted premises		105	1150 123	800		rangiti. E	27
270	Failure to obey requisition to clear or cleanse etc, building or land in filthy state or overgrown		*	125			orde order	18
272	with prickly pear or other noxious vegetation Failure to obey requisition to lime-wash or otherwise cleanse building	2 2 9	326	228 3 2 7	305	ĺ	Walter He of	4
273	Failure to obey requisition to execute work or take other action with respect to insanitary building	671	2046	2667	1697			130
279 280 2 83	Prohibition in respect of lodging house Unlawful keeping of pigs to Repairs to or demolishing of stable, cattle-	.05	; [•••	•••	•••		•••
284	shed etc. Construction or maintenance of stable, éatile shed.	}- √ .5	33	38	25	2	i.e dry h	•••
286 287 (3)	etc, contrary to Act or subsidiary legislation Failure to remove carcass of animals Use of place without licence or contrary to licences		26	26	23 .:. 1	•••	no dupite of	•••
293 (2)	Washing of clothes by washermen at unauthorsied place	G ;		•••	•••	•••		•••
297	Slaughter of animals for sale of food or skinning or cutting up carcasses without licence or contrary to licence drying skin so as to cause a nuisance	ا د د د ا		•••	•••	•••		
299	Carrying on milk trade without licence or contrary to licence Opening private market without licence or con-			•••	•••	•••	minter of the	•••
303 (2)	trary to licence Keeping open private market without a licence or	۶ G	•••	· • • • • • • • • • • • • • • • • • • •	iliit	1 . A.	regern interior All	•••
309	contrary to licence Carrying on butcher's fish monger's or(poulteror's)	J.		•••	•••	•••	•••	•••
310	trade without licence etc. Sale of article in public streets after 'prohibition or contrary to regulations	•••	•••	•••	•••	•••		•••
334	Failure to obey requisition to cleanse or disinfect building or ariicle	,	1			•••	nel10 1 17, 17(x	•••
345 349 (6)	Failure to give information of small-pox Keeping the latrines without sufficient water supply for ilushing.	5	385	390 A	383	(·7	v God Jan 1	•••
349 (13)	Use of place as a factory without licence or contrary to licence	٠ د	•••	17		 	weil) elm [n])re	•••
3 4 9 ' (16)	Use of place without licence or contrary to licence Carrying on milk trade without cleanliness	•••		•••	•••		***	•••
349 (11) (21)	Use of place without sanitary certificate or contrary to sanitary certificate		٠	•••	٧,٠		Sy thousands of	•••
					*	9 14	well, in III II	

1 is .

the statement of prosecutions instituted during the year 1937.

2	No. of prosecutions rending disposal on 1st January 1937.	No. instituted during the year.	Total.		KOSECUTION				ti es		
2	~ - -	nstituted durin year.	Total						ţ		
	101	No. i		No. convicted.	Fines impos	ed.	No, aequitted.	No. withdrawn.	No. in which parties were not found,	No. pending.	Remarks.
(8)	(9)	(10)	(11)	(12)	(13))	(14)	(15)	(16)	(17)	(18)
	1	•••	1	•••	Rs	A P.	•••	1	···	***	
	0	•••	•••	•••	***		•••	•••	• • •	•••	
242 .	61	308	369	174	263	8	2	137	•••	56	
•••	•••	•••	•••	•••	***		•••	•••	•••	•••	
•••	•••	•••	•••	•••	•••	•••	•••	•••	•••	•••	
•••	•••	•••		•••	•••		•••	•••	•••	•••	
	1	25	26	11	9	12	2	12	•••	, 1	
•••	•••	•••	•••	•••	•••	•••	•••	•••	•••	•••	
248	27	180	207	68	84	8	1	108	•••	30	
6	5	30	35	14	24	4	1	16	•••	4	
35	18	, 76	94	62	73	4	6	13		13	
20	•••	. 2	2	1	•••	8	•••	1	•••	•••	
456	41 1 5	367 351 44	408 352 49	208 268 44	296 99 9 149	4	$\frac{1}{2}$	136 20 	 1	63 62 4	
11	187	1536	1723	1438	6093	8	5	81	4	195	
3		1	1	1	•••	4	•••		•••	•••	
***	34	 21 3	247	 160	1089	8	2	63	 1	21	
		35	35	26	13	8	***	9	•••		
•••		7	7	5	2	4	2	•••	***		ı
•••	2	21	23	12	3 2		•••	7	•••	4	
***	1	0	1	1	1	8	•••	•••	•••	•••	
•••	9	30	39	16	56		1	13	8	1	
•••	4	26	30	18	175	8	3	2	•••	7	
	14	235	249	179	185	4	•••	37	. 8	25	
	•••	16 12	16 12	10 7	32 4	4	•••	4 3	2	2	
		•••	•••	•••	•••		•••	•••	•••	•••	
•••	97	401	498	352	1328	8		98	13	31	
•••	•••		7	2	9	4	•••	5	•••	•••	
	12	150	162	106	124		2	26	•••	28	

Statement of unwholesome articles of food destroyed during 1937.

Appams, Iddlies and other rice preparations	•••	6,593	
		1,811	Baskets.
Beef	•••	76	lbs.
Butter	•••	$4\frac{1}{4}$	lbs.
Butter-milk	•••	5	Pots.
Cheese	•••	898	Tins.
Coffee and Tea	•••	3,365	Kettles.
Curd	•••	17	Pots.
Eggs	•••	2,505	
Fish	•••	1,555	
		1,716	Baskets.
Fruits	•••	64,263	
		1,081	Baskets.
Goat-heads	•••	36	
Grains	•••	303	Measures.
		347	Baskets.
Milk	•••	13	Measures.
Mutton	•••	396	Visses.
Pork	•••	5 0	lbs.
Preserved food-stuffs	•••	2,408	Tins.
,		242	Packets.
Sweet-meat	•••	250	lbs.
Syrups and Aerated-waters	• • •	1,367	Bottles.
Trash	•••	2,256	
		957	Trays.
		1,478	Baskets.
Vegetables	•••	2,460	
		1,868	Baskets.

103

Fotal No. of New Skin and Lepexcluding and Lep-Leprosy. rosy Cases. 84,775 91,232 1,426 5,031 Statement showing the number of Skin and Leprosy cases treated at the various institutions during 1937 with results. Number of New Skin 90,229 4,532 1,306 84,391 Arrested. 48 139 265 452 Improved. 230 230 No. Results. No. Symptoms refree. 20 4 ಛ 22 No. Cured. : 1,003 499 120 384 Total. Number of Leprosy Cases. Non-Infective. 270 59 322 651 Infective. 229 62 352 61 2-2-1934 4-8-1931 opening. Date of 1935 : Vyasarpady Skin and Leprosy Clinic Skin and Leprosy Clinic ... Other Corporation Dispen-1 Ice House Road Grand Total ... Institutions. Name of saries 02 Serial No.

Services rendered at the Venereal Clinic of the Corporation of Madras at 55 Puliantope High Road, Perambur during 1937.

Sypl	Syphilis.	Soft Chancre.	nancre.	Gonorrhoea.	rhoea.	Other Di	Other Diseases of	Non-Venereal.	nereal.		Total.	
						vencrea	vencreal origin.					
M	<u> </u>	M	<u> </u>	M	<u> </u>	M		M	I	M	1	Total.
:	:	•	:	:	•	:	:	:	•	:	•	:
63	:	•	•	•	:	:	:	:	:	23	:	F2
32	•	•	:	:	:	:	:	:	•	70	:	2
:	:	:	•	:	:	•	•	:	:	:	:	:
က	:	:	•	:	:	:	:	:	:	အ	:	ಐ
:	:	•	:	•	:	•	:	•	:	:	:	•
:	:	က	:	•	:	•	•	:	:	ಣ	:	ಣ
:	:	:	:	55	2	:	•	:	:	22	63	24
:	:	:	:	13	က	:	:	:	:	13	ಣ	16

	es :	5 68			Total.	71		Wassermann Test.	•	T. T.
2	ಐ	63			injections.		gical.	Wass		
:	:				Other in	19	Serological			
:	:	က			y.		-	Test.		7.1
:	:				Antimony	10		Kahn		e. allemantatura i processo de describiros de la compresión de la compresi
13	:	12	89	400						
:	:	70		-	Mercury.	:		nococci	57	
:	:	35						For Gonococci		•
:	:	•			Bismuth.	17	Microscopical.			
:	:	ಣ			Bis		Micro	actes.		
:	:	:			Arseno Benzene compounds.	25		For Spirochastes.	:	•
:	:	10			Arseno Benz compounds.					
OTHER DISEASES OF VENEREAL ORIGIN like Bubo, Vencreal granuloma etc.	NON-VENEREAL CONDI- TION suspected to be duc to V. D	Total	Total No. of New Cases	Total Attendance up to 31st, December, 1937.	Treatment given at the clinic	Total Number of injections		Falhological work done.	(a) Number of specimens examined at the clinic by the M.O.(b) Number of specimens from patients of the clinic sent to	an approved laboratory (King Institute).

Statement showing the number of cases admitted and discharged and of deaths under various diseases in the Tondiarpet Infectious diseases Hospital during 1937.

Total.	-	2174	2175	1790	371	17.1	14
Other Diseases.	:	374	374	282	91	24.3	H
Plague.	:	. :	:	:	:	• :	:
Secondary syphilis.	•	•	:	•	:	:	:
Pulmonary Tuber-	:	:	•	:	:	:	:
Kala-azar.	:	:	:	:	:	. :	:
Pyrexia of unknown origin.	:	:	:	:	:	:	:
Malaria.	:	хa	χŷ	ž0	:	:	
Enteric fever.	:	, 	H	-	:	:	:
Pneumonia.	:	•	:	•	:	•	:
Whooping cough.	:	ಣ	B	က	:	:	:
·sdunM	•	50	50	50	•	•	•
Diarrhoea.	•	, . .	H	, 	•	:	:
Dysentery.	:	73	C 2		H	50.0	:
Cholera.	-	885	886	671	204	23.0	11
Measles.	•	52	52	50	C3	3,8	:
Chicken-Pox.	:	402	403	401	:	:	
Small-Pox.	•	399	399	32.55	73	18:3	, 1
Details.	Patients remaining in the Hospital on 31st December 1936 at Midnight	Patients admitted from 1st January 1937 to 31st December 1937.	Total number treated	Total number discharged	Total number Died	Mortality rate per cent	Patients remaining in the Hospital on 31st December 1937 at Midnight

107

Statement showing the number of cases Admitted and Discharged and of Deaths under various Diseases in the Krishnampet Infectious Diseases Hospital during 1937.

Total		807	842	(2000) 1 (1) (1) (1) (1) (1) (1) (1) (1) (1)	4	16.75	
			1.	Example 1	, C.C.		
Other Diseases.	6	95	98	64	19	19.39	
Diphtheria.	:	•	:	•	:	:	:
Cerebro Spinal Meningitis	•	:	:	:	:	:	: .
Secondary Syphilis.	•	C4	8	63	•	: 0	
Pulmonary Tuber- culosis.	:	:	:	:	•	:	
Kala-azar.	•	•	:	:	:	:	:
Pyrexia of un- known origin.	:		:	: ,	:	•	:
Malaria.	:	:	:	:	•	:	:
Enteric Fever.	:	:	:	:	:	- •	:
Pneumonia.	•	:	:	:	:	:	:
Whooping Cough.	•	:	•	:	:	:	:
·sdun Jų	: ,			-	:	:	•
Diarrhoea.	:	:	•	:	:	:	:
Dysentery.	:	:	•	:	:	:	:
Cholera.	<u>-</u>	54	61	38	23	37.70	:
Measls.	C 7	38	40	40	:	:	i
Сһіскеп-рох	20	155	175	172	•	:	က
Small-pox	က	462	465	318	66	21.30	48
Details.	Patients remaining in the Hospital on 31st December 1936 at mid-night	Patients admitted from 1st January 1937 to 31st December 1937	Total Number Treated	" Discharged	" Died	Mortality rate per cent	Patient remaining in the Hospital on 31st Dec. 1937 at mid-night

108

per cent.

		Mortality	9.99	9.99	9.99	:	:	44.4	28.0	37.5	25.0	:	38.9
37. nated.		Recovered cases.	c 2	62	 i	-	:	10	18	40	9	•	80
uring 1937. Unvaccinated.		Deaths.	4	4	C 7	:	•	∞	2	24	сา	:	51
pital du		.snoissimbA	9	9	ಣ	H	:	18	25	64	∞ .	:	131
Small-Pox in the Tondiarpet Infectious Diseases Hospital during 1937. Univaccinat		Mortality per cent.	:	22.2	20.0	:	:	12.2	9.1	2.3	:	:	5.7
ious Dis	tal.	Recovered.	67		41	-	-	43	66	218	30	4	409
t Infect	Total.	Deaths.	•	62	-	•	:	9	10	9	:	•	25
ndiarpe		Total admitted.	2	G	, č		Н	49	100	224	30	4	434
the To	d with visible.	Mortality per cent.	:	9.99	:	:	:	54.5	47.6	66.6	:	:	52.1
-Pox in	ate	Deaths.	:	62	:	:	÷	9	10	9	:	;·	24.
r Small	Vaccing marks n	Total admitted.	:	က	:	÷	, - i	11	21	6	, i	:	46
patients for cinated.	ble.	Mortality percent.	•	:	20.0	:	:	•	•	:	•	•	20.0
of Vac	marks visible.	Deaths.	•	:	H	:	•	:	:	:	:	:	
showing the Vaccinal Condition		Total admitted.	62	9	5	- -	:	38	88	215	53	#	388
al Co	successfully with	9	•	•	:	:	:	:	:	:	C 2	C1	4
accin	cessf	20	:	:	:	:	:	:	:	:	:	:	
he V		4	:	:	:		:	17	47	144	20		201
ing t	Vaccinated	~	:	:	:	:	:		21	45		:	80
show	Vacc	C1		9	5	:	:	2	12	32	C 2	:	99
	1	-		:	:	:	:	50	∞	24	•	:	37
Statement		Ago	Under 1 year.	1 to 2 years.	2 to 3 ",	3 to 4 ",	4 to 5 ",	5 to 10 ",	10 to 20 ",	20 to 40 ",	40 to 60 ,,	60 & upwards.	Total

Statement showing the vaccinal condition of patients admitted for Small-pox in the Krishnampet Infectious Diseases Hospital during 1937. 5.00 33.33 66.6757.14 38.1 44-6 Mcrtality per cent. Un vaccinated 10 13 9 47 Recovered. ∞ 9 N, 38 ∞ ∞ CJ Death. 14 18 ∞ 85 ∞ က 2 Admission. per cent. 99-99 16.18 42.86 17.65 16.66 90.9 14.4 12.511-11 Mortality 04.1 316 ∞ 107 Recovered. Total. 18 30 4 က 61 Death. 170 9 G 125 377 .noissimbA 33.33 28.74 25.0 50.0 9.09 32.43 per cent. Vaccinated with marks not visible. Mortality 12 Death. Vaccinated. 36 94 2 CJ 11 37 admitted. : Total 13.33 50.00 99.99 4.55 6.82 per cent. Mortality Vaccinated successfully with marks visible. 18 34 4 က Death. 134 88 283 22 admitted. CZ C_2 Total : O 50 \$ 00 : 45 07 **C**1 30 98 4 33 07 C7 42 03 18 60 & upwards Under 1 year. 10 to 20 ,, 20 to 40 " 40 to 60 " Total 5 to 10 4 to 5 2 to 3

Statement showing the admissions in the Krishnampet Infectious Diseases Hospital according to nationality and sex during 1937.

Nationality.		Males.	Females.
Europeans	• • •	Nil	·Nil
Hindus	•••	335	203
Mohamadans		20	8
Others	•••	146	95
Tot	al	501	306

Statement showing the admissions in the Tondiarpet Infectious Diseases Hospital according to nationality and sex during 1937.

· Nationality.		Males.	Females.	
Europeans & Anglo Indians		21	16	
Hindus -	• • •	1,239	779	
Mohammadans	• • •	68	24	
Others	•••	20	7	
Total	•••	1348	826	

Medical Inspection of Corporation Schools. 1937-38. STATEMENT No. I

H		rks.	жета						170		_											
-		Fotal of Entrants and Regulars.	reaget.	Percer			ာ ထဲ	19	Ø €	2.0	•	0.0	0.07	0	0	0	<u>ن</u> د	C 7	0.	0.1	. 1	
-		Total trants Regu	tive,	oN oələC		396	1050	2510	305 10	129	:	2 2	7. 0. 70		51	32. 80.	834	277	14	21		
		ırs.	Percentage.	1986-37		2.46	6.63	20.68	0.18	0.40	0.30	0.05	60.0	10.64	.0.38	97.0	5.12	2.23	:	0.15		
	Girls.	Regulars.	Perce	1937-38			15	19	2:44	1.01		_	0.03						:	2.23		
	G			oN Defec		228	558	1343	17.1	71	:	2 0	27	09	26	 	474	168	:	16		
		ts,	ntage.	1936-37	¥ _4.	2.78	7:37	23.20	3.25	0.81	0.04	0.05		0.87	0.50	01.0	: -	0	0.57	\vdash		
		Entrants,	Percentage	1937-38		2.81		19	N 0	0	:		0.02	0.95		1			0.23			
	•			oN Defed		168	492	1167	10,4 40,00	580	i	:	ာ က	57	25.		360	10.)	14			
		otal of En- rants and Regulars.	.egetn	Percei		12.45	- Ó	2	0 1/2	-	0	O	0	_	0 ,	40	∞	က်	0	0		
		Total trant Reg	•	oN · Defec		2266	1695	3094	504 94	240	20 C	0.03	# C	236	126	0.70	1551	7 18	93	17		
			Percentage:	1936-37		13.32		15.17	1.21	1.59	80.0	0.017	0-13	1:11	1.45	61.0	11.07	4.65	:	90.0		
	Boys.	Regulars:	Perce	1937-38		11.47) Ö	-	3 0.57	7	20.00				· ·	0.10		1 3.9	:	0.15		
,	Bo			oN Defec		1176	1.996	1541	134	12		16	F		2 31	100	844	.407	:	<u> </u>		
		ts.	ntage.	1937-38 1936-37	ŧ	15.79	10.11	19-21	0.52	1.38	-	0.04	0.12	1.86	660	0.0.7	10.66	5.30	2.03	0.17		
		Entrants.	Precentage.	1937-38					3 0.45		<u> </u>	0.21				3 0.04				0:03		
	y			N. Defec		1090	669	1553	1:0		7	7.1	# :	119	40) C.	707	311	93	<u>പ</u>		
								:		•	•	:			:	Svstems	is diseases.		:	:		
		4	• • • • • • • • • • • • • • • • • • • •			and naile	all a					8	,	em	S1	hic Sv	ntagion	and defects	,			
		J. C.	Cic			rition	Mouth	Throat	Ses	ses		-v Gricto	osis	ry Syste	al Organs	and joints	ous and contagious	eases an	on	es		
						Malnutriti Dirty hea	Teeth and Mouth	Nose and Throat	Eye diseases Vision	Ear diseases	Hearing	Speech Circulatory System	Tuberculosis	Respiratory System	_	Bones and Joints Nervous and Psychic	Infectious	Other diseases	Vaccination	Deformities		
-	,	7	ò			~ C	က	4 n	ဂ	7	∞ (ۍ ر ر		12		4	16	17	18	19		

APPENDIX TO STATEMENT No. I--1937-38

Group '	No. or	Roll.	9	dance.		lo.		ctive.		ntage.
Group	Boys	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Entrants. Regulars.	20576	15549	16812	11796	79 4 6 102 5 3	59 85 7003	4 069	2077 26 45	51·21 46·51	34·70 37·77
Total	20576	15549	16812	13.796	18199	12988	8838	4722	48.56	36.36

STATEMENT No. 2 HEIGHT AND WEIGHT TABLE.

	Во	oys.	Gi		
Age,	Average height in inches.	Average weight in Pounds.	Average height in inches.	Average weight in pounds.	Remarks.
5	40.51	31.98	39.94	31.02	
6	42.15	35.49	41.04	36*95	
7	43.59	37.92	43.23	37.11	
8	45.62	40.98	45.22	41.11	
9	48.22	44.61	47.19	43.11	
10	49.70	48.91	49.01	47.06	
11	50.72	51.95	50.33	53.33	
12	52.41	53:38	52:39	54.26	
13	56.92	58.40	54.60	63.07	
14	57.06	64.89	58.98	66.13	
15	57.00	68.47	58.16	76.98	
16	59.93	76.29	59.30	82.48	
17	61.83	108.05	59.17	85.64	
18	62.30	90 25	58.63	91.16	
19	64.42	114.51	54.95	88.45	
20	65.00	118.00	57.53	82.96	
21		• • •	60.97	115.21	
22 -		• • •	61.00	115.50	One woman,
23		• • •	60.00	89.00	,,
24		• • •	58-25	95.00	Two women.
25		• • •	59·2 5	105.50	One woman.
26	• • •	• • •	60.00	80.00	,,
27	• • •	• • •	59.00	94.00	,,
28	• • •				,,
29		• •	59.00	118.00	,,
30	•••	• • •	58.50	98.00	,,
					1

113
Quinquennial average of heights and weights of boys and girls.

17: 18:

No.	Age.	Average heig		Average weight of boys and girls.			
		Boys.	Girls.	Boys.	Girls.		
1	5 years.	39.89	39.14	34.62	31,67		
$2 \mid$	6 ,,	42.43	40.55	37.19	34.32		
3	7 "	43.80	42.84	38,80	35·6 5		
4	8 "	45.62	44.70	41:08	39.60		
5	9 ,,	. 47.43	46.92	44.30	43.75		
6	10 ,,	49.78	48.90	50.17	46:55		
7	11 ,;	51.50	51.00	52.14	52·1 6		
8	12 "	53.07	52.86	54.60	56.43		
9	13 "	54.56	54.69	57 ·96	63.15		
10	14 ,,	55.35	5 6 ·7 3	65.15	6 9·7 9		
11	15 ,,	58.17	57·5 6	69.49	74.75		

				01		to ot	tmen	t Table.	to		Sı			-	Colored to the Colored	
	Group.		No. sent to Co poration Dis- pensaries.	1	Government Hospitals,	Ophthalmic Applies App	of other Hospital		No. referred Govt. Gosha Hospital.		No. of parent	No. of re-vision of school	No. of re-exan	qren.	Kemarks.	
Boys Girls		::	7477	~ ~	396 299	66		တ က	:		2868 1992	139	20713 9915	9915		
	Total	<u> </u>	11640		1624	114		12			4860	282	30628	828		
						Teeth	and	Mouth Tal	Table.					-		
- 1					Entrants.	ants.					Re	Regulars.				
				Boys.			Girls.			Boys.			Gir	Girls.		
No.	Defects.		No. Defective.	No. sent to Corporation Dispensaries.	No. referred to Government Hospitals.	No. Defective.	No. sent to Corporation Dispensaries.	No. referred to Government Hospitals.	No. Defective.	No. sent to Corporation Dispensaries.	No. referred to Government	Hospitals. No. Defective.	No. sent to	Corporation Dispensaries.	No. referred to Government Hospitals.	oplab latoT g bas syod
	Dirty Teeth	:	127	40	52	51	:	32	164	65	71		49		35	391
C 7	Dental Carics	:	280	160	101	119	30	98	317	173	116		170	12	158	686
ಣ	Stomatitis	:	365	365	:	320	320	:	543	543	•	ന 	338	338	:	1,566
चा	Tongue Tie	:		:		က	:	ಣ	6			6	C ₂	•	C 2	15
70	Oral Sepsis	•	:	÷	:	:	:	•	:	:	•		•	•	•	:
9	Other Conditions	•	П	:	:	H		•	67	- 	•		Н		:	, 0
		N.B.	Cases	not amenable	nable to or	not requiring	ring treatmen	ment have	been omitted	tted in the	he treatment		column.			

Table.
Throat
and
Jose

		Total defe	243	C 7	4900	4	143	431	. ¥2	=	۲ ۳ ۲
		No. referred to Government Hospitals.	:	:	200	:	9		:	~	
	Girls.	No. sent to Corporation Dispensaries.	C 3	:	918	:	:	191	:	7	
Regulars.		No. Defective.	Cd	:	1118	•	9	201	7	6	
Reg		No. referred to Government Hospitals.	:	•	132	:	74	c 2	2	:)
	Boys.	No. sent to Corporation Dispensaries.	115	•	1268	23	:	31	:	:	
		No. Defective.	115	:	1400	5	74	සි	2	H	
		No. referred to Government Hospitals.	:	7	64	:	⊢ i	:	*	•	
	Girls.	No. sent to Corporation Dispensaries.	9	:	933	:	:	148	:	Н	
ants.		No. Defective.	မွ	7	266	:		161	2	(
Entrants.		No. referred to Government Hospitals.	:	H	89	:	62	тĦ	:	:	
	Boys.	No. sent to Corporartion Dispensaries.	120	:	1317	2	:	35	•	:	
	•	No. Defective.	120	~	1385	. c ₂	62	98	~	:	
		Defects.	Nasal Catarrh	Nasal Polypus	Enlarged Tonsils	Granular Pharynx	Adenoids	Enlarged cervical glands	Bifid & elongated uvula.	Other Conditions	
		No.	prod	67	က	4	20	9	7	8	

N.B. Cases not amenable to or not requiring treatment have been omitted in the treatment column,

闰
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girls.	As suq	Total defective of bo	144 39 39 11 12 267 19 19 44 104
		No. referred to Govt. Ophthalmic hospital and Ophthalmic sections of other hospitals.	39 2 2 14
	Girls.	No. sent to Corporation Dispensaries.	25 : : : : : : : : : : : : : : : : : : :
.rs.		No. Defective.	25 1 39 12 57 57
Regulars.		No. referred to Govt. Ophthalmic hospital and Ophthalmic sections of other hospitals.	9 1 1 11 13
	Boys.	No. sent to Corporation Dispensaries.	34 10‡ 1 2
		No. Defective.	35 102 104 113 588
		No. referred to Govt. Ophthalmic hospital and Ophthalmic sections of other hospitals.	
	Girls.	No. sent to Corporation Dispensaries.	31
ıts.		No. Defective:	7 1 62
Entrants.		No. referred to Govt. Ophthalmic hospital and Ophthalmic sections of other hospitals.	:::00 ::::::::::::::::::::::::::::::::
	Boys.	No. sent to Corporation Dispensaries.	87 4 + 1 10 110
		No. Defective.	37 10 10 77 75 36
			y
		Defects.	Conjunctivitis Blepharitis Granular lids Corneal opacity Corneal ulcer Staphyloma Dacryocystitis Cataract Xerosis Stye Squint Keratitis Ptosis Other conditions Defective vision
		O	101 22 4 70 D D D D D D D D D D D D D D D D D D

N. B. Cases not amenable to or not requiring treatment have been omitted in the treatment column.

puŧ	e skoo	Total defective of l	1313 884 333 1222 1223 344 31 31 503 71
		No. referred to Special sections of Hospitals.	: : : : : : : : : : : : : : : : : : :
	Girls.	No sent to Corporation Dispensaries.	319 50 16
Regulars.		No. Defective.	319 63 16 61
Reg		No. referred to Special sections. of Hospitals.	
	Boys.	No. sent to Corporation Dispensaries.	359 359 107 11 11 11 11 8
		No. defective.	359 333 107 46 9
		No. referred to Special sections of Hospitals.	
	Boys. Girls.	No. sent to Corporation Dispensaries.	253 15 15 1 : 2 24 : : : : : : : : : : : : : : : : : : :
nts.		No. Defective	86. 25. 1 : 24 : 1 : : : : : : : : : : : : : : : : :
Entrants.		No. referred to Special sections of hostipals.	: : : : : : : : : : : : : : : : : : :
		Vo. sent to Corporation Dispensaries	382 105 105 113 123 123 114 1111
		No. Defective.	382 106 106 108 108 109 109 109 109 109 109 109 109 109 109
		Defects.	Skin:— Seabies Eczema Tinea and Fungus Lichen Dermatitis Pruritis Psoriasis Impetios Leprosy Other Conditions Other Infectious disease:— Malaria Kala-azar Hook-worm Influenza Mumps Whooping Cough Congenital Syphilis Other Conditions
		o Z	100470000 100470010

N. B. Cases not amenable to or not requiring treatment have been omitted in the treatment column.

Total defective of boys and girls.

OTHER DISEASES TABLE.

Hospitals. General Government No. referred to Dispensaries. Girls. Corporation Vo. sent to No. Defective. Regulars. Hospitais. General Government No. referred to Dispensaries. Boys. Corporation No. sent to No. Defective. .elatiqeoH General Government No. referred to Dispensaries, Girls. Corporation of fines .cV No. Defective. Entrants. Hospitals. General Government No. referred to Dispensaries, Boys. Corporation No. sent to No. Defective. Wounds, cuts, ulcers etc., Enlarged groin glands Leucodermic patches Undescended Testis Boils and abscesses Burns and Scalds Defects. Other conditions Xeroderma Phimosis **Fumours** Oog bite Whitlow Pyrexia Keloids Obesity Warts Sinus No. ∞ \odot 12 14

N.B. Cases not amenable to or not requiring treatment have been omitted in the treatment column

119
Statement showing the details of defects found on Medical Inspection of Schools, 1937-38.

				No. D	efective,		Total
No.	Systems or Organs.	Diseases.	Enti	ran t s.	Reg	ulars.	defective of boys and
	Ü		Boys.	Girls.	Boys.	Girls.	girls.
1	Ear.	1. Otorrhoea 2. Otitis 3. Other ear diseases 4. Defective hearing	103 4 6 3	36 20 2 	104 15 6 2	54 17 1	297 56 15 5
2	Speech.	1. Stammering 2. Lisping 3. Dumb	11 5 1	•••	12 4 	2	25 9 1
3	Heart and Circulation.	1. Heart Disease (a) Organic (b) Functional 2. Anaemia 3. Other conditions	10 19 3	2 3 	17 8 18 4	7 14 	41 18 54 7
4	Langs.	1. Bronchitis (acute and chronic) 2. Other non-tubercular diseases (Asthma etc.)		51	6	55 5	33 2 2 1
.5	Tuberculosis.	1. Pulmonary (a) Definite (b) Suspected 2. Non-Pulmonary (a) Glands (b) Spine (c) Hip (d) Bones & Joints (e) Skin (f) Other forms	• • •	2 1 	1 4 1 1 	1 1 	1 7 2 1 1
6	Abdominal Organs.	1. Enlarged Spleen 2 ,, Liver 3. ,, Liver and Spleen 4. Hydrocele (a) Vaginal	10 1 7 5 6 8 2 1	8 1 2 6 8 	27 2 9 3 2 25 8 3 4 3	4 1 6 13 2 1	49 2 2 16 8 2 31 19 17 25 6 1
7	Bones and Joints.	1. Bones (a) Fractures (b) Caries (c) Deformities (d) Diseases (d) Diseases (e) Dislocations & Sprains (f) Diseases (g) Deformities (h) Diseases (c) Deformities (d) Diseases (e) Diseases (f) Deformities (h) Deformed chest	2 1	5 1 2 	 1 2 165	 1 8 2 8	1 6 1 5 3 5
8	Nervous system.	1. Organic disease (Palsies etc.) 2. Functional disorders 3. Other conditions	 2 1	•••	2 8 2	2 1 	4 11 3
9	Psychic system.	1. Mentally defective	•••	•••	•••	•••	

120

Statement showing the details of defects found on Medical Inspection of Schools, 1937-38. (contd).

				No. De	efective.	,	Total
No.	Systems or Organs.	Diseases.	Entr	ants.	Regi	ulars.	defective of boys an
			Boys.	Girls.	Boys.	Girls.	Girls.
10	Deformities.	1. General Deformity:— (a) Special deformity (b) Talipes (c) Shortened limbs (d) Congenital dislocation hip (e) Ankylosis of joints (f) Amputated limbs (g) Genu Varum & Valgum (h) Supernumerary Fingers (i) Flat foot (j) Syndactily (k) Dwarf (l) Other conditions	1		 3 2 1 2 7	1 1 5 1 3 2 4 1 	1 6 6 3 3 1 6 4 1 10

121
Statement of "Following-up" work done showing the results of Medical advice, 1937-38.

					0		C Th
Number.	Systems or Organs.	Diseases.	Operations performed after medical advice	No. of cases cured after treatment.	No. of cases improved after treatment.	No. of cases where treatment was continued.	Remarks.
1	•••	Malnutrition		27	1292	833	-
2	Teeth & Mouth	Dirty Teeth Dental Caries Stomatitis Glossitis Tongue Tie	56*		36 384 	7° 29 299	f Scaled. °Cleaned. *Extracted.
3	Nose & Throat.	Rhinitis Enlarged Tonsils and Adenoids	127	62 584	44 1,191	1 981	
		Enlarged Cervica glands Granular Pharynx Nasal Polypus Elongated uvula		21 1 2	139 3 	88	
4	Eye Diseases	Xerosis Stye Granular lids Blepharitis Staphyloma Pterygium Corneal opacity		93 2 12 7 	13 112 2 22 112 3	8 81 25 3 	
		Keratitis Squint Sub-Conjunctival Haemorrhage		1		•••	*Glasses worn.
5	Defective Vision		2*	10	2	34	
6		Otitis Otorrhoea Wax ear Other conditions Defective hearing	1	35 81 5 	5 46 3 	 57 1	
7		Anaemia Functional disease Organic disease	•••	3 5 	22 1 1	18 14	
8		Pulmonary— (a) Definite (b) Suspected Other forms			1 2 	 5 4	
9		Bronchitis Asthma	•••	183	57 7	17 8	5. Indiffer-
10	Abdominal Organs.	Enlarged Spleen ,, Liver ,, Liver and		15	16 1	11	ent. 2. Left.
		Spleen	•••		1	1	^

Statement of "Following up" work done showing the results of Medical advice, 1937-38.—contd.

	`, <u>;</u> . e }}	*1	Operations performed after medical advice.	No. of cases cured after treatment.	No. of cases improved after treatment.	No. of cases where reatment was continued.	
ن	Systems	Diseases.	Operations formed aft	to. of cases cured after treatment.	No. of cases proved after treatment.	No. of cases where treatment w	Remarks.
pe	or Organs.	171304303.	per orm ical	of ired eat	rov rov	No ses utm	
Number.	0		o erfe	No Cu tr	NG mp	ca: trea	
_			0 11	1	·=]
	Abdominal	Diarrhoea	• • •	4	$\frac{2}{2}$	• • •	
	Organscontd.		• • •	8	$\frac{2}{2}$	3	
i		Dyspepsia Chronic constipation.	•••	$\frac{\circ}{6}$			
		Jaundice	• • •	1	2		
		Hydrocele	2	•••		• • •	
		Inguinal Hernia	• • •		•••		,
		Umbilical Hernia	• • •	• • •	•••	•••	
11	Ronge & Toints	Rickety Chest and			111		
- 1	Dones & Johns	General Rickets	• • •	• • •	171	40	
		Fracture	•••	• • •	•••	• • •	
7.0	T C .:	C . 1:		727	218	85	
12		Scabies Eczema	•••	50	12	9	
	Contagious Diseases.	Tinea, Fungus and	• • •	,	100		
		Ringworm	•••	147	46	80	(34. Indiffer-
		Leprosy	•••	2	32	428 31	ent.
		Lichen	•••	19 4	29 8		
		Pruritis Urticaria	•••			• • •	excluded.
		Psoriasis	•••	1	• • •	• • •	
		Hook-worm	• • •	°5	2	1	
		Mumps	•••	5 2	2	1	
		Whooping cough Dermatitis	• • •	3		.	
		Influenza	• • •		• • •		
		Filariasis	• • •	• • •	• • •	• • •	
4.0					3	1	
13		Facial Paralysis Incontinence of	• • •	• • •	O	Т.	
	Psychic Systems.	urine		• • •	• • •	1	
14		Worms	• • •	45	•••	• • •	
	and defects.	Wounds, cuts, ulcers		228	20	4	
		Boils and Abscesses.	1	3 5	2	$\frac{1}{5}$	
]	Pyrexia	•••	66	3	•••	
1		Phimosis	79	• • •	•••	10	
		Leucodermic patches.	•••	• • •	1	13	
		Burns, Scalds and Whitlow	1	7	i	•••	
		Xeroderma		15	17	11	,
		Enlarged groin					
		glands		•••,	$\begin{bmatrix} 4 \\ 1 \end{bmatrix}$	•••	
		Warts Dog bite	•••	1	1	•••	
		Tumours	• • •		• • •	1	
		Hypospadiasis		•••	• • •	•••	
		Ganglion	•••	•••	•••	•••	
		Cellulitis Other conditions	•••	3	,2	2	
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Nature of samples	Number of samples analysed in 1934	Percentage of adulterated samples in 1934	Number of samples analysed in 1935	Percentage of adulterated samples in 1935	Number of samples analysed in 1936	Percentage of adulterated samples in 1936	Number of samples analysed in 1937	Number of adulterated samples in 1937	Percentage of adulterated samples in 1937
Ghee & Ghee, Mixtures	460	44.5	340	44.4	523	28.9	484	158	31.6
Butter .		27.2	44	29.5	86	87.8	122	24	19.7
Milk .	105	41.9	06	50.0	74	28.4	80	27	333.
Gingelly Oil	259	27.8	305	18.0	246	လ	263	24) ·6
Ground-nut Oil	:	•	•	:	63	37.1	711	17	23.9
Cocoanut Oil		:	:	:	:	:	30 %	×	
Coffee Powder	26	, :	18	.5.6	∞ .	:	. 02		•
Tea		•	6	:	5	:			:
Ghee substitutes of vegetable? origin	:	:	:	:	12		. 01		: 0
Other articles	:	:	:	•	က	ද ද දිද) -	- 4	9.01
							0	•	:
lotal	986	35.7	806	32.9	1,028	23.9	1,094	246	22.5

.9861 m	Average fine per conviction	Rs. 28	26	21	28	19	:	:_	:	:	26
98	Number of convictions in 193	118	. 28	32	26	14	:	:	, •,	:	218
.7891 mi	Average fine per conviction	Rs.	21	24	26	54		•	:	:	30
		٠.0	0	0	0	0					0
		A.	0	0	0	0	:	:	:	:	0
	Total fines levied in 1937.	Rs.	620	425	365	310	i	:	•	· 	6,210
of ples 1937.	Total number pending disposal on 31-12- 937,	09	11	12	11	10	:	:	:	:	104
Total, number of adulterated samples dealt with during 193	Total number not convicted:—acquittals, withdrawals, 'no prosecutions' etc.	24	က	:	8	67	:	:	:		32
Cotal, ultera t with	Total numb of con-	136	29	81	13	13	:	:	: ,	. :	500
adı dealt	Total number of samples.	220	4 3	30	26	25	:	:	:	-	345
les out 337.	Number pending disposal on 31-12-37.	•	က	:	:	:	:	:	:	:	က
ted samples in 1936 but upon in 1937	Number not convicted:— acquittals, withdrawals, 'no prosecutions' etc.	:	:	:	:	:	:	:	:	:	•
Adulterated received in 1 reported upon	Number of convictions.	. 64	:	:	:	÷	:	:	:	:	2
Adı rece	Number of samples.	8	က	:	•	:	:	•	:	:	5
on on	Number pending disposal on 31-12-37.	м	:	•	:	-	:	:	:	:	9
ed samperious years solutions and disposal 1937.	Number not convicted: acquittals, withdrawals, no prosecutions' etc.	ra	က	•	8	C.J	•	•	:	:	12
	Number of convictions.	55	13	က	:	30	:	:	:	:	92
Adulte of the pendir	Number of samples.	65	16	က	2	<u> </u>	:	:	:	:	94
les ·	Number pending disposal on 31-12-37.		∞	12	11	<u>0</u>	:	:	:	:	95
ated samples and reported ing 1937.	Number not convicted:— acquittals, withdrawals, 'no prosecutions' etc.	19	•	:	:	:	•	:	:	-	50
Adulterated received and during	Number of convictions.	79	16	15	13	∞	•	:	•	•	131
Adu	Number of samples.	ت ت د	24	27	24	17	:	;	:		246
		Ghee and Ghee-mixtures.	Butter	Milk	Gingelly Oil	Ground-nut oil	Coffee	Tea	Cocoanut oil	Ghee substitutes of vegetable origin	

TABLE I.
Showing the Meteorological Data for the City of Madras, 1937.
(Daily Averages)

Month.	Hours of Bright Sunshine.	Mean Temperature F	Velocity of wind in miles per day.	Total Rain fall (in inches) for the month.
January	9:1	75.8	291	0.07
February	10.1	78.3	252	•••
March	9.8	81.1	250	•••
April	8.7	82.9	263	2.61
May	10.1	87.8	305	•••
June	6.8	88.9	315	2.11
July	4.6	84.6	251	3.42
August	8-5	76.6	254	6.91
September	7:3	84.0	245	5.50
October	6.1	80.5	223	10.00
November	4.2	76.9	351	23.81
December	8:5	69.0	258	7.25

TABLE II.
Showing the Monthly Lake Level and Rainfall in Sholavaram and Red Hills lakes for 1937.

		Sholavara	am Lake.		Red Hi	lls Lake.	
Month.	ļ	Total	Lake level	Total	Average	Average Te	emperature.
		rainfall in inches.	in feet.	rainfall in inches.	lake level.	Maximum.	Minimum.
January 1937		0.05	58.42	0.16	45.35	91.7	72.9
February.	• • •	0.20	55.92	0.12	44.62	91.3	72.8
March		0.0 <	53.60		43.97	90.6	72.2
April	• • •	3.10	52.72	3.20	42.65	95.3	74.5
May		Nil.	51.62	• • •	41.30	102.4	81.2
June		Nil.	48.39	0.67	39.79	101.9	82.2
July ,		5.37	47.36	3.72	38.44	98.8	77.7
August		4.43	48.19	4.20	37.62	95.6	76.9
September	• • •	5.26	47.94	6.35	36.92	95.1	76.7
October	5	13.22	52.13	13.41	42.16	88.7	75.4
November		21.49	60.20	27.33	46.15	85.2	74.3
December	•••	3.25	60.74	3.56	46.19	86.0	74.2

TABLE
Bacteriological Results

6.00	Sphalasterante energy.	ny- ndo	**	After	January Control	ot yo <u>r ne I</u> tankene	a company		v pa										1		
1937.					Red	l Hills	s lake			İ		Ra	w-v	vater	Kilp	auk e	n d.				
		c. c. on			La	ctose	Fern	ne n te	ers in			c. c. on at 37°C		Lact	ose I	erme	enter	s in		•	r c.c. on at 37°C
Month.	Number of Samples.	es per	48 hours.	-60 c. c.	+60 c. c.	+20 c. c.	+10 c. c.	+5 c. c.	+1 c. c.	+0.1 c.c.	Number of Samples	Total colonies per of Nutrient Agar a after 48 hours.	—60 с. с.	+60 c. c.	+20 c. c.	+10 c. c.	+5 c. c.	· · · · · · · · · · · · · · · · · · ·	+0.1 c. c.	Number of Samples.	Total colonies per Nutrient Agar at
anuary			• •	• • •				• • •	•••	•••	2	755		••	•••	100.0	•••	•••		34	558
February		•	•••					•••	• - •		4	770		•••	•••	25.0	75.0	•••	••.	32	632
March .						•••	•••	•••	•••	•••	5	810		•••	• • •		80.0	20.0	• • •	33	658
April			•••		•••	•••	•••	•••	•••		5	814	•••	•••	•	•••	 60·0	20.0		37	583
May			•••			•••		• • •	•••		4	837		•••	•••	25.0	25.0	50.0		34	614
June		1	890			10 0 ·0	• • •	•••		•••	5	838		20.0	40.0	40.0	• • •	•••	• • •	4 0	551
July		• •	•••				• • •	•••	•••	•••	4	883		•••	25.0	•••	50.0	2 5 ·0		36	616
August		• •	•••		• • • •	•••	• • •	•••		•••	4	900	•••		•••	50.0	•••	50.0		43	657
September	•	••	•••			•••	•••	•••	•••	•••	5	892				20.0	40.0	40.0		3 5	554
October			• • •			•••	•••	•••	•••	•••	4	825		• • •	•••	5 0·0	50.0		• • •	40	596
November	• • •	1	790			•••	100.0	•••	•••		3	743		•••	•••		100.0	• • •	•	; 6	562
December	•••	1	500	••	•	•••	100.0	•••	•••		4	668		• • •		50.0	25.0	25.0		28	474
						,															

No. III.

Percentage Averages.

]	Filtra	tes i r	om b	eds.			Tes	st Tap l	Kilpa	uk Pi	ımpir	ng S	Sta	tio	n.			Dis	tribu	tion S	System	m.		
	Lac	tose	Ferm	ente	rs in.			c. c. on 37°C	La	ctose	Ferr	ner	te	rs i	n		c. on		Lact	ose F	erine	enters	in.	_
or c. c.	+60 c. c.	+20 c. c.	+10 c. c.	+5 c. c.	+1 c. c.	+0.1 c. c.	Number of Samples.	Total colonies per Nutrient Agar at after 48 hours.	60 c. c.	+60 c. c.	+20 c. c.	+10 c. c.	+5 c. c.	+1 c. c.	+0.1 c. c.	Number of Samples.	Total colonies per c. Nutrient Agar at 3' after 48 hours.	60 c. c.	+60 c. c.	+20 c. c.	+10 c. c.	+5 c. c.	+1 c. c.	+0.1 c. c.
)·8	11.8	41.2	8.8	23.6	5 ·8	• • •	20	375	25.0	70.0	5.0			- • •		6	54 0	• • •	16.7	33.3	16.7	3 3·3	• • •	•••
<u>:</u> 5	9.4	28.1	28.1	15.6	6.3	•••	19	337	68 ·4	31.6	•••		•••		•••	1	640	• • •	•••	•••	100 0		•••	
	12.1	27.3	18.2	39.4	3.0		15	3 30	33.3	86.7	•••		•••	•••	• • •	4	29 0	25.0	50.0	25.0		• • •	•••	- • •
:2	16.2	32.4	10.8	19.0	5.4		21	270	76.2	14.3	9.5	•••		• • •	• • •	•••	•••	•••	•••	•••	•••		•••	•••
9	12.0	47.0	14.7	24.0	•••		21	360	5 2 ·4	38.1	9.5		•••	• • •	•••	11	5 30	18.2	27.3	27.3	• • •	18.2	9.1	
·0	22.5	37.5	12.5	10.0	2.5	•••	21	369	8 0 ·9	14.3	4.8	•••	•••	•••	•••	6	567	50.0	16.7	3 3·3	• • •	•••	•••	. ••
	25.0	33.4	25.0	8.3	8.3	•••	20	438	35 ·0	40.0	25.0	•••	•••		•••	6	523	50.0	•••	5 0·0		• • •	• • •	
. 7	11.6	20.9	27.9	18.6	9.3	•••	24	3 9 4	45 ·8	33.3	20.3		•••	• • •	. • •	10	428	50.0	30.0	10.0	• • •	10.0	•••	
·9	17.1	40.0	17.1	14.3	8.6	• • •	23	293	34· 8	47.8	17.4	•••	•••	•••	•••	21	289	23.8	3 8·1	23.8	9.5	4· 8	• • •	
.0	15.0	27.5	22.5	20.0	10.0	•••	22	328	77-3	4.5	18.2		•••	•••	• •	6	658	•••	16.7	•••	66.6	•••	16.7	• • •
••	11.1	3 8·9	25.0	13.9	11.1	•••	27	155	85.2	14.3		•••		•••	•••	15	107	86.7	13.3	•••	•••	•••	•••	
l·3	14.3	28.6	7.1	7.1	17.9	10.7	37	114	97·3	2.7	•••	•••	• • •	•••	•••	10	175	90.0	•••	•••	•••	10.0	•••	•••
										٠														

TABLE No. IV.

Chemical Results for 1937 (Results expressed in parts per 100,000.)

tem.	Absorbed oxygen.	0.03	9600	0.008	:	0.095	0.107	0.136	0.121	0.113	0.034	0.0070	0.047	
ion Sys	Albuminoid Nitrogen.	0.0 30	0.036	0.035	•	0.037	0.034	0.048	0.040	0.037	0.034	610.0	0.021	
Distribution System	Ammoniacal Nitrogen.	Trace	Trace	0.001	•	0.003	Trace	0.003	0.00 }	0.004	Trace	0.001	Trace	
· S	Absorbed oxygen.	0.084	0.101	260.0	0.099	0.105	0.115	0.117	0.117	0.112	0.088	0.068	0.058	-
Test Tap K. P.	Albuminoid Nitrogen.	0.030	0.035	0.033	0.035	0.035	0.037	0.040	0.040	0.036	0.057	0.023	0.031	
Test	Ammoniacal Nitrogen.	Trace	Trace	0.001	0.001	0.005	Trace	0.003	0.003	0.005	0.001	Trace	Trace	
beds.	Absorbed oxygen.	0.104	0.120	0.124	0.126	0.117	0.132	0.136	0.1 2	0.139	0.112	0.032	0.072	
s from	Albuminoid .ungeni.	0.03	0.040	0.035	0.039	0.000	0.038	0 043	0.044	0.038	0.031	0.024	0.024	
Filtrate	Ammoniacal Nitrogen.	Trace	Trace	0.001	0.001	0.005	0.001	0.001	0.005	0.004	0.003	Trace	Trace	
of Idiut.	Absorbed oxygen.	0.139	0.153	0.145	0.144	0.154	0.158	0 162	0.168	0.165	0.152	0.139	0.110	
Kilpauk end of Raw-water condiut.	Albuminoid Nitrogen.	0.045	0.043	0.046	0.050	0.043	0.053	0.055	0.058	0.044	0.037	0.1.40	0.034	
Kil. Raw	Ammoniacal Nitrogen.	123.0	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0.001	0.001	Trace	Trace	
. Se	Absorbed oxygen.			:	:	•	0.174	•	•	:	:	0. 15	0.10	
Red Hills lake.	Albuminoid .msgonin		•		•	•	0.020	•	•	•	:	6,0.0	0.030	
Re	Ammoniacal Nitrogen.			en 25 4	•	÷	Trace	•	:	:	:	Trace	Trace	
				:	•	•	•	•	•	:	•	:	•	
1937.	Month.	Tanuary	February	March	April	May	June	July	August	September	October	November	December	

129
TABLE No. V.

Percentage Reduction of organic matter (Tidy's 4 hours test) at different stages of the Water Purfication System--1937.

		Raw- water Kilpauk end.	ł	es from ds.	rising Ma	p on the ain at the g station	Service taps in the distribution system.		
Months.		Absorbed oxygen in parts per 100,000.	Absorbed oxygen in parts per 100,000. Reduction over R.W.		Absorbed oxygen in parts per 100,000.	% Reduction over R.W.	Absorbed oxygen in parts per 100,000.	% Reduction over R.W.	
January February March April May June July August September October November December		0.139 0.153 0.145 0.144 0.154 0.159 0.162 0.168 0.165 0.152 0.139 0.110	0.104 0.120 0.124 0.126 0.117 0.132 0.136 0.132 0.1°9 0.112 0.092 0.072	25.2 21.6 14.5 12.5 24.0 17.0 16.0 21.4 15.8 26.3 33.8 34.5	0.084 0.101 0.097 0.099 0.102 0.115 0.117 0.117 0.112 0.088 0.068 0.058	39.6 34.0 33.1 31.2 33.7 27.7 27.8 30.4 32.1 42.1 51.1 47.3	0.093 0.096 0.098 0.095 0.107 0.136 0.121 0.112 0.084 0.070 0.047	33.1 37.2 32.4 38.3 32.7 16.0 28.0 32.1 44.7 49.6 57.3	

TABLE No. VI.

Applied dose of chlorine for filtered water.

1937.	ed dose in parts er million.	Remarks.
January February March April May June July August September October November December	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.01 1.15 0 95 0.90	

TABLE No. VII.

Showing the length of runs of filters at work during 1937.

Bed No.	Total No. of runs during the year	Total No. of days Day-Hours.	Average No. of days per run.	Remarks.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	10 8 10 8 9 9 8 10 9 8 8 9 4 8 9	233.16 214.10 220.00 238.20 213.00 234.00 236.20 232.80 243.10 233.60 211.16 198.14 112.20 228.16 194.40 229.60 214.22	$\begin{array}{c} 23\frac{1}{3} \\ 26\frac{3}{4} \\ 22 \\ 29\frac{3}{4} \\ 23\frac{2}{3} \\ 26 \\ 29\frac{1}{2} \\ 23\frac{1}{4} \\ 27 \\ 29\frac{1}{6} \\ 26\frac{1}{2} \\ 28\frac{1}{4} \\ 28\frac{1}{2} \\ 21\frac{1}{2} \\ 45 \\ 26\frac{3}{4} \end{array}$	

TABLE No. VIII.

Showing the quantity of water filtered during 1937.

Bed No.	Quantity of million gallon		Total quantity of water filtered in	Remarks	
Ded No.	8"	12"	million gallons.	Kemarks.	
1	294.75	258.50	553.25		
2	296.50	198 ·50	495.00		
3	311.25	193.00	504.25		
4	308.00	225.75	533.75		
5	297.75	224.50	5 22 25		
6	328.00	210.50	538.50		
7	358.00	173.50	531.50		
8	309.50	229.75	539.25		
9	349.00	205.50	554.50		
10	323.25	214.75	540.00		
11	250.00	260.00	510.00		
12	261.50	203.50	465.00		
13	153.50	108.50	262.00		
1.4	342.50	172.00	514.50		
15	278.00	165.75	443.75		
16	99.50	526.25	625.75		
.7	304.00	188.75	492.75		

ANNUAL REPORT OF THE CHILD WELFARE SCHEME, CORPORATION OF MADRAS, FOR THE YEAR 1937.

The Commissioner,
Corporation of Madras.

Sir,

I submit herewith my report of the Child Welfare Department for the year 1937.

During the year under report, on account of the increased activities of the department, the infantile mortality rate has been considerably reduced, and in fact, it was the lowest on record since the inauguration of the Scheme by the Corporation. That the Scheme is gaining popularity is evidenced by the increased number of attendance at the Ante-Natal Clinic at many centres, which are over-worked.

Staff:—During the year under report, the Scheme was worked by the Lady Superintendent assisted by five Lady Doctors, 3 Maternity Supervisors, 22 Health Visitors and 82 Midwives.

At present 3 centres covering an area on an average of about 6.9 sq. miles are placed under the charge of one Lady Doctor and so she is able to visit each centre only twice in a week. So Ante-Natal Clinics are held twice a week. Infants and Toddlers Clinics are held once a week during afternoon. Besides this work, Lady Doctors had also visited puerperal cases and attended urgent calls.

Out of 26 Health Visitors 1 died, 1 retired, 2 resigned and only 22 were on duty. Substitutes could not be appointed as qualified persons were not available. Owing to the inadequate number of Health Visitors, the Home Visting work suffered considerably.

Ante-Natal Clinic:—In almost all the centres there was heavy attendance for Ante-Natal Clinics. The number of booked cases that sought medical advice and treatment had increased to 12356 which worked at 84% of the total births as against 10661 (78%) for the year 1936. Expectant mothers are advised to attend the Clinics from the 12th week of their pregnancy, but such of those who had trouble at a previous confinement are advised to attend even earlier and special attention was paid to them. There is still a noticeable indifference to early registration of pregnancy. With an adequate staff of Health Visitors this work of home visiting and advice could be further augmented and cases of pregnancy with definite signs of organic diseases could be kept under observation and aid rendered at maternity hospitals sufficiently early.

After the separation of the out-patient clinic from the Child Welfare Centres, the patients find it inconvenient to take advice and prescription at the Centre and proceed to take medicine to dispensaries located at a distance. There is a public feeling that dispensaries should be attached to every Centre and that there should be one Lady Doctor in charge of each Centre.

Maternity Service:—At the commencement of the Scheme, Maternity Service was made available to the public without any restriction; under the rules now in force, such service could be rendered only to the poor and to the lower middle class whose salary does not exceed Rs. 50 per mensem. During the year under review, 14589 cases of labour representing 47% of the total births were treated by the Department, as against 13651 cases (46.7%) for the year 1936.

The Midwives paid 1,74,422 visits during 1937 as against 1,61,166 in 1936. To make the existing staff more efficient, 6 midwives were sent for Refresher Course at Rajah Sir Ramaswami Mudaliar's Lying-In-Hospital Royapuram, during the year under review. They were trained on uptodate lines in Ante-Natal, Intra-Natal, Post-Natal and Children's care.

Maternal Mortality:—Out of a total number of 30,958 births in the City during the year 1937, 14,589 cases came under the care of the Scheme and in that, there were only 48 cases of Maternal mortality as hereunder mentioned.

Hospital	3 8
Private Doctor	3
Vydians	3
Barber Woman	1
Child Welfare	
Scheme	3
	48

This works out at 3 per mille which is the lowest on record as against 3.7 for the last year. Though the infantile mortality rate shows a definite tendency to decline, the maternal mortality rate practically remains stationary since 1933.

1937	3.0	per mille.
1936	3.7	• • • • • • • • • • • • • • • • • • • •
1935	3.0	,,
1934	3.4	25
1933	3.1	"
		77

Infantile Mortality:—It is gratifying to note that the infantile mortality rate of 112.3 for the year under review as against 124.2 per mille of the previous year is the lowest on record in the history of the Scheme.

The total number of live births registered during 1937 was 13651. The mortality among live birth was 1533, as against 1787 for 1936. This low rate of mortality is due to the fact that the mothers were carefully looked after and treated during their ante-natal period.

1937	112.3	per mille.
1936	124.2	,,
1935	138.2	,,
1934	142.2	,,
1933	142.7	"

Infantile and Toddlers Clinic:—Infants and Toddlers Clinic was conducted once a week at the centres by the Lady Doctors. Necessary examination and advice regarding their diet, health, etc was given. The total attendance at the the clinic was 9750 as against 7876 during the year 1936.

Milk Supply:—433 deserving babies were supplied with cow's milk during the year 1937 as against 418 for 1936. The total attendance was 1,04,589 as against 98,353 for 1936. It is hoped that the milk supply would be extended to the ante-natal mothers also, so that the health of the expectant mothers can be improved and thus the infants may have a better start in life.

Bath:—783 babies were given warm bath last year as against 977 during 1936.

Ambulance Car:—For cases of emergency to convey patients in labour an ambulance car is maintained by this department and the same is stationed at Ripon Buildings.

The old car which has served for over 10 years is replaced by a new car. The total number of calls answered is 726 as against 512 for 1936.

Health propaganda:—609 lectures were delivered in the various Child Welfare Centres as against 601 for 1936 Of those 278 lectures were delivered with aid of magic lantern, 31 were cinema lectures and 300 were out door lectures. The total attendance was 23,254 as against 25,458 for 1936.

11 talks on various subjects relating to Maternity and Child Welfare were broadcast during 1937. Pamphlets and maxims on the activities of the Scheme were also printed and distributed to the public.

Health Exhibition:—Health Exhibition was held at the South Indian Athletic Association grounds during Park Fair. The Maternity and Child Welfare activities were exhibited by means of models and charts of educative value which attracted the women folk. In this connection a gold medal was awarded to the Child Welfare Scheme for the models and a certificate of merit for the charts.

Conclusion:—As there is an unlimited scope for work covering a wide field, the present staff is inadequate to cope with the growing demand for the entire scheme. For this the Women Medical Officers, Health Visitors, and Midwives should be increased.

The work in George Town Centre has become very heavy and the work may be distributed by opening a new centre in Park Town. It is hoped next year at least one more centre would be opened in Park Town to relieve the congestion in George Town Centre.

Our thanks are due to the Commissioner, Heath Officer, Corporation of Madras, Members of the Standing Committee (Health) and the Assistant Director of Public Health (Maternity and Child Welfare), Government of Madras, for the advice and guidance given as and when necessity arose and the co-operation of the staff.

MADRAS, 23-6-38.

H. V. KAMALAMMAL,

Lady Superintendent, Child Welfare Scheme,

134 STATEMET No. I.

	Но	w conducted	d.		Ca	ste.	
Centres.	By nurses of the C.W.S.	Taken over after the barber women conducted. Taken to Hospital.		Total cases.	Mahom- medans.	Non Mahom- medance.	Remarks.
Triplicane	1,756	67	61	1,884	727	1,157	Including 12 Twins.
Royapettah	541	51	51	643	77	566	,, 4 Twins.
Mirsaibpet	1,108	60	84	1,252	228	1,024	" 13 Twins.
Nungam-	309	17	28	354	63	291	,, 2 Twins.
bakkam. Egmore	757	. 56	55	868	112	756	,, 4 Twins.
Pursawalkam.	1,064	40	55	1,159	44	1,11.5	,, 6 Twins.
George Town.	1,597	59	82	1,738	32	1,706	" 5 Twins.
Choolai	1,173	76	150	1,399	60	1,339	,, 6 Twins.
Muthialpet	1,054	84	91	1,229	304	925	,, 13 Twins.
Washerman-	1,332	66	69	1,467	280	1,187	" 12 Twins.
pet. Perambur	1,249	62	82	1,393	304	1,089	" 10 Twins.
Royapuram	1,091	54	58	1,203	128	1,075	" 7 Twins.
Total	13,031	692	866	14589	2,359	12,230	

135
STATEMENT No. II.

Number of visits paid by the staff of the child welfare scheme during the year 1937.

Centres,	Midwives.	Health Visitors.	Maternity Supervisiors	Lady Drs.	Total
Triplicane Royapettah Mirsahibpet Nungambakam Egmore Pursawalkam George Town Choolai Muthialpet Washermanpet Perambur Royapuram Total	21,310 9,882 13,158 6,438 11,493 14,871 20,268 15,619 14,180 17,784 15,926 13,493 1,74,422	14,530 7,736 11,381 6,414 9,662 9,628 6,293 • 9,650 8,833 9,441 8,748 8,625	3,677 4,658 2,684 	393 288 335 332 306 378 335 342 319 343 314 381	39,910 17,906 24,874 13,184 21,401 24,877 31,554 25,611 23,332 27,568 27,672 22,499 3,00,388

STATEMENT No. III.

Statement showing the number of Aanti-Natal Cases Registered and number of booked cases conducted by C. W. Scheme during 1937.

,	ered.	cases ded cs.	Nnml	per of b	ooked	cases co	onducte	ed by	
Centres.	Number of A. Cases register by H. Vs.	No. of booked cases which attended A, N clinics.	C. W. Staff.	Barber Woman	Hospital.	Private Doctor.	Cases not Traceable.	Cases not Confined.	Total.
Triplicane Royapettah Mirsaibpet Nungumbakkam Egmore Purusawalkam George Town Choolai Muthialpet Washermanpet Perambur Royapuram	1,300 631 1,020 426 693 718 672 938 628 564 902 1,409	1,222 305 827 1,031 1,646 984 1,239 1,319 918	248 773 129 426 472 $1,360$ 473 614 673 613	74 73 71 60 109 108 72 65 128 109 22 54	203 98 174 60 122 113 68 136 184 181 27 32	28 11 7 2 16 16 9 4 21 2 8	96 25 123 34 62 86 48 173 146 158 143 207	59 38 74 20 92 236 89 133 146 196 113 189	493 1,222 305 827 1,031 1,646 984 1,239
Total		12,356	7,203	945	1,398	124	1,301	1,385	12,356

STATEMET

Anti-natal cases registered and diseases and ailments of pregnancy

Centres.		Constipation.	Dispepsia.	Scanty Urine.	Dysentery.	Bronchitis.	A. P. H.	Stomatitis.	Fever.	Leucorrhoea.	Albumimuria.	Anaemia.	Diarrhoea.	Debility.	Neuritis.	Ringworm.	Swelling.	Skin affection.	Asthma.
Triplicane Royapettah Mirsaibpet Nungambakkam Egmore Purswalkam George Town Choolai Muthialpet Washermanpet Perambur Royapuram		235 52 261 114 370 259 259 204 212 160 166 543	31 5 8 7 70 29 17 33 30	10 183 30 62 96 18 97 34 54 34	7 2 3 11 11 22 7 16 11 8	50 19 26 9 35 8 23 9 20 27 39 11	1 3 1	91 48 69 12 39 47 158 115 85 24 4	1 3 29 14 1 1	3 7 1 6	54 18 10 9 14 66 53 53 44 32 20 38	346 72 116 24 90 93 159 98 67 86 105	8 1 17 11 44 12 11 2 5 4	5 6 25 56 28 71 76 87 52 47 69	7 1 4	2 6 18 16 15 1	8 11 7 7	4 3 3 63 9 10 7 5 4	3
Total	• • •	2,835	230	652	98	276	7	697	54	17	411	1,354	115	522	12	59	55	108	16

STATEMENT

Maternal Morbidity

Centres.	Anaemia.	Albuminuria.	Malaria.	V. D. H.	Bronchitis.	Dysentery.	Influenza.	Retained Membrane.	Ple	Retained Placenta.	Eclampsia.	Pnumonia.	T. B.	Ulcerated Vagina.	Retention of Urine.	Syphilis.	Asthma.	Diarrhoea.	Jaundice.
Triplicane Royapet Mirsahibpet Nungambakkam Egmore Pursawalkam George Town Choolai Muthialpet Washermenpet Perambur Royapuram	75 22 21 22 71 124 15 19 20 34 5 30	12 12 15 40 9 28	1	1 4 1 15	10 35	4 5 11	$\begin{vmatrix} 1 \\ 2 \\ 3 \end{vmatrix}$	7	1 1 1 1 1 1	3	5 1 4 1 2 6 1 1 2	10 1 2	16 1	2 4 12	5 8 36 2		1 1 1 6 2 3 1 1 2	8 2 5 17 28 5 20 9 4 8 9	2 1 1 1
Total	458	169	58	28	144	126	60	9	11	4	23	16	22	21	57	5	19	115	5

No. IV.

diagnosed and patients advised for treatment during the year 1937.

Varicose Veins.	Malaria.	Eclampsia.	4	V. D. H.	Giddiness.	Syphilis.	Ulecerated Vulva.	•	Worms.	Sic	Rention of Urine.	UJ I	T. B.	Normal.	Strangury.	Influenza.	General Anasarca.	Other diseases.	Pthisis.		Eear & eye Diseases.	1	Not confined in 1936 but subsequently con- fined in 1937.	Total.
16 2 1	54 14 8 12 4 2	1		13 14	2 7 5 10 4 2 4	1		22 14 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	9 9	25 9 32 2 2 1 2		1	1 1 5 1 4 1	327 175 392 52 218 347 329 512 247	9 2	8 16 12	32 16 9 1	8 39 2 7 56 51 80 107 58 95	3	2	1	3	96 66 51 42 51 72 87 101 144 191 116 100	1,286 493 1,222 305 827 1,031 1,646 984 1,239 1,319 918 1,086
19	94	7	77	79	34	<u>A</u> .		8 17	100	66	3	2	13	2,559	13	88	63	503	4	2	1	3	1,117	12,356

No- V.
(Perpural) 1937.

Indigestion.	Gastritis.	tion.	Mastitis and Breast Abacess.	A. P. H.	P. P. E.	Skin Diseases.	S. omat tis.	Sepsis.	Ulcerated Vulva.	Fever& Hyperpyaexia.	After pains.	General Anasarca.	Debility.	Swelling.	Perinium tear.	Oedema.	Eczama.	L. P.	Other Diseases.	Total.
13 5 43	1 1 2 1	106 17 7 106 139 39 2 5	1 1 13	3	1 3 3	18 12 13 3 1	11 3 4 56 44 24 6 5	1	1 1 1 3	4 60 7 6 50 19 82 35 45	10 16 3 134 82 10	1 5	8 1 4 38 15 15 19 7	3 1 2 16 27	3	25 11 10 2	-	5	13 2 9 1 89 4 6 2	404 81 137 83 549 931 208 158 187 153
	3	21 55		1	$egin{bmatrix} 1 \ 3 \ 2 \ \end{bmatrix}$	3 6	7 18	1	1	6 16	10 2 2	6	14 30	1	2 4	8		4	21	124 300
62	8	497	27	1.1	17	62	178	2	32	351	294	17	152	51	15	56	1	9	153	3,345

STATEMENT No. VI

A

Maternal mortality (Puerperal) among cases treated by Child Welfare Scheme for 1937.

Centres.		Tuberculosis	V. D. H.	Adherent Placenta.	Eclampsia.	Titanus.	P. P. H.	Anaemia.	Heart-failure	Total.
Triplicane		•••	1		•••		• • •		•••	. 1
Royapettah		• • •		•••	•••			•••	• • •	• • •
Mirsaibpet	• • •	• • •		•••	•••	• • •	• • •	• • •	• • •	
Nungambakkam				•••						
Egmore	• • •	• • •			•••	••••		•••		• • •
Purasawalkam		• • •	• • •	• • •	•••	•••	•••	• • •	•••	
George Town						• • •		•••	•••	`••
Choolai				•••	•••	•••	• • •			• • •
Muthialpet	• • •		•••	•••	•••	•••				• • •
Washermanpet	• • •		•••		•••			-1	1	1.
Perambur	• • •	• • •	•••	•••	•••			1		1
Royapuram				···				•••		•••
Tota	al	• • •	1					1	1	3

STATEMENT No. VI

B

Deaths among cases brought to the notice of the Child Welfare Scheme in 1937 but not under our treatment.

**************************************		Triplicane.	Royapettah.	Mirsaibpet.	Nungambak- kam.	Egmore.	Purasa walkam	George Town.	Choolai.	Muthialpet.	Washermanpet	Perambur.	Royapuram.	Total.
1. In Hospital .	• •	5	• • •	1	•••	2	4	5	5	3	2	7	4	38
2. Under Private Doctors .		• • •		• • •			• • •	1	•••	2		•••		3
3. Under Vydians treatment.		• • •	• • •			1	1		1	• • •	•••			3
4. Under Barber Women		• • •		• • •		• • •				• • •	• • •	1	•••	1
Total.		5	• • •	1	•••	3	5	6	6	5	2	8	4	45

139

STATEMENT No. VI

C

Showing the causes of deaths among cases brought to the notice of the Child-Welfare Scheme but not under our treatment in 1937

Centers.		General Anasarca.	Fever.	Retained Placenta.	Adherent Placenta.	Eclampsia.		F	Placenta Fraevia.	Diarrhoea.	Sepsis.	Pneumonia.	P. P. H.	Dysentery.	Rupture of Uterus.	Anaemia.	Heart Failure.	Causes Unknowm.	Total.	
Triplicane			2	•••	1	1		1			• • •	• • •							5	
Royapettah	• • •	•••	• • • .	•••															•••	
Mirsaibpet		• • •				1	• • •.											• • •	1	
Nungambakkam	•••			•••		• • •						•••							• • •	
Egmore	•••	•••	•••		1			• • •						1				1	3	
Purasawalkam					2				,			2						1	5	
George Town						1	1			1	1		1		1	1			6	
Choolai	• • •					2					1			2				1	6	
Muthialpet				1	1						2			200			1		5	
Washermanpet						1								1					2	
Perambur		. 2		•••		1				• • •		1		3		1			8	
Royapuram				••••			1	•	1	· · ·		1					. 1		4	
Total	• • •	$\frac{1}{2}$	2	1	5	7	1	1	1	1	4	4	1	7	1	2	2	3	45	

Maternal Mortality Rate.

FOR CHILD	WELFAR	SCHME
-----------	--------	-------

CITY.

1937 - 3.0	per mille.	1937 - 9.3	per	mille.
1936 - 3.0	•• ••	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$,,	,,
1935 - 3.0 $1934 - 3.4$,, ,,	1934 -11:1	"	"
1933 - 3.1	;; ;;	1933 -11.6	"	"

STATEMENT No. VII.

Ages at death of Infants born during 1936 and kept under observation during the first year of life.

trace-	No. of children able wh year	1,077 468 822 295 486 847 1,007 973 564 1,134 600 600	
ton 9	Left Ci otherwis tracea	521 67 170 20 132 107 848 61 426 182 455 291	
Ilita 8	Total d Total d dinibulaxe	261 128 43 111 134- 155 169 169 176 176 1,533	
	6 to 12 months.	990 157 157 157 158 158 188 188 188	
Died within.	3 to 6 months.	40 9 21 9 9 38 30 43 43 30 316	
Died	1 to 3 months.	62 10 19 7 28 30 29 45 45 45 14 19	
	10 days.	60 23 12 18 30 49 43 19 29 31	
	Still born.	48 28 29 119 13 56 41 32 42 36	
23ns1 .9861		1,907 620 1,149 377 742 1,114 1,244 1,147 1,566 1,244 1,147 1,147 1,045	
	ec. 1936.	Total	
	From 1st Jan. to 31st. Dec. 1936.	Triplicane Royapet Mirsahibpet Nungambakam Egmore Pursawalkam George Town Choolai Muthialpet Washermanpet Perambur	-

		per
	City Rate.	1937220·8 1936216·5 1935223·9 1934228·2 1933264·3
INFANT MORTALITY RATE.	For Infants under the care of child welfare scheme.	1937112.3 per mille. 1936124.2 1935138.2 ., 1934142.2 ,, 1938142.7 ,,

mille.

STATEMENT No. VIII.

Causes of deaths among infants born in 1936 and kept under observation during the first year of life.

traceable. Number of living Children traceable.	521 1077	67 468	170 822	20 295	132 486	107 847	348 1007	61 973	426 564	182 1134	455 649	$291 \mid 600$	80 8922
Left City and not	55		17		——————————————————————————————————————	10	34		45	18	4.		2780
Total Deaths.	261	57	128	43	111	134	155	109	125	156	16	118	1533
Swelling.	:	:	:	:	:	:	:	4	•	:	:	:	1-7
Influenza.	:	:	:	:	:	:	ಣ	:	:	:	:	:	ಗು
Diarrhoea.	58	:		2	:	9	10	G:	24	35	17	16	103
Causes unknown.	8		∞		:		∞	2	20	4	9	:	64
Jaundice.	-1	:		:	:	:	:	:	:	:	:	:	
Scabies.	<u>:</u>	<u>:</u>	<u>:</u>	<u> </u>	<u>:</u>	:	<u>.</u>	ಣ	<u>:</u>	:	<u> </u>	<u>:</u>	4
Rickets.	<u> </u>	<u>:</u>	<u>:</u>	:	:	•	:	<u>67</u>	:	:	:		4
Constipation.	- <u>7</u> 0		:	:	:		:	- H	-	.:	:	4	109
Abscess. Skin Disease.	-6			<u>.</u>	<u></u>		:	<u>:</u>	:	4		C 2	251
Measles.	:	:	:	:		. :	:		:	:	:	:	1
Debility.	<u>62</u>	-	10	:		:	:		- 6	:	- i	<u> </u>	283
Dysentery.	~	$\overline{}$	2	<u>c</u> 2		<u>.</u>	10	, ₇ 0	70	<u> </u>	:	C 2	115
tive medicine.	:	:	:	:	:	:	17	:	:			∞	189
Drugged with na-	4	· 		:		•	2		:		:		2 2
Whooping Cough.								·					25
Convulsions.	4 13	:	10		1 11	10	5 6	<u> </u>	9	12	1 1	5 7	17 88
Malnutrition.		:	:					<u> </u>	<u> </u>	<u> </u>			
Bronchitis.	- 67				•	20	12	:	:		•		49
Small-Pox.		:	9	:					:	9			24
Enteritis.	:	13			35	20			:	C1	:	C1	123
Fever.	83		33		37	39	17	29	38	35	17	20	364
Pneumonia.	ಣ	:	4	က		7	55	14	9	:	:	ಣ	40
Died within 10 days.	09	23	34	12	18	30	49	43	19	43	29	31	301
Still born.	48	28	29	19	13	26	56	41	32	46	42	36	416
Total Infants born in 1986.	1907	620	1149	377	743	1114	1566	1244	1147	1518	1222	1045	13651
		:	:	:	:	:	:	:	:	·	:	:	:
Š													Total
Centres.													
Ce				Н		u				دد			
1				tkaı		ham	/n			ipe			
	Je	Rayapett a h	et	Nungumbakkam		Puras a walkh	George Town		et	Washermanpet	ıre	am	
	Triplicane	pet	Mirsaibpet	mn	Egmore	M d	ge J	lai	Muthialpet	lerr	P era mbure	Royapuram	
	ipl.	ıya	irsa	ng	Smo	ıras	Borg	Choolai	uth	asi	ıraı	Dy a	
		8	<u></u>	\overline{z}	Ш	P	(5	\ddot{z}	Ţ.	3	4	2	

STATEMENT No. IX
Showing the number of cases taken on for milk supply during the year 1937.

142

Centres.		taken on for milk supply.	Yearly attendance.	Average daily Attendance.
Triplicane Royapettah Mirsaibpet Nunkambakkam Egmore Purasawalkam George Town Choolai Muthialpet Washermanpet Perambure Royapuram To	otal	38 28 40 25 53 45 30 32 28 27 47 40	10,055 7,759 7,731 8,652 12,231 12,666 6,656 5,617 7,686 6.834 9,439 9,263 1,04,589	$ \begin{array}{c} 28.00 \\ 21.20 \\ 21.00 \\ 23.70 \\ 33.50 \\ 34.70 \\ 18.23 \\ 15.30 \\ 21.05 \\ 19.00 \\ 26.00 \\ 25.30 \\ \end{array} $

STATEMENT No. X
Showing the number of children who were given free baths during the year 1937.

$\operatorname{Centres}$.		New admissions.	Number of baths given to babies.	Average daily Attendance.
Triplicane Royapettah Mirsaibpet Nungambakkam Egmore Pursawalkam George Town Choolai Muthialpet Washermanpet Perambur Royapuram		41 27 55 75 49	4,804 4,690 3,092 5,265 8,253 8,177 4,066 4,411 2,950 7,069 6,105 5,224	13·0 12·8 8·0 14·4 22·6 22·4 11·13 12·08 8·08 19·0 17·0 14·5
	Total	783	64,106	174.99

STATEMENT XI.

Showing the details of Health Propaganda Work done by C. W. S. Staff in 1937.

1	1		1
	Total.	50 00 00 00 00 00 00 00 00 00	609
	*cocrocin rouro		4
1	Other diseases.		19
	Skim diseases.		
	Cleanliness.		m
	Good Habits.		C3
-	Gnowing the Knome.		6
	Bending the twig.		-
	Your mouth.	<u> </u>	
	Nagamma,	n: 12 m : m : m : m : m	9
	Story of Seetha and	— H H W : :	1 4
	Dental Care.		1
	Ante-Natal Care.	:-cj :- :- :	
	Care of infants.		4
	Child Welfare.	[C] : [C] : : : : : : : : : : : : : : : : : : :	7
	Infant feeding.	<u>шн :- нююю : ад :</u> нн : ;а :ан444н	124
	General Sanitation.	<u> </u>	21
Subjects.	Breast fed Baby.		6
bje	Insects & diseases		
Sul	Flies,	<u> </u>	47
	pongrue.	:ଘ⊣ପର ∶ଘଠାୟସଥ⊸	21
	Ventilation and	. : : : : : : : : : : : : : : : : : : :	07
	Plague.		
	Water-supply.	::::::::::::::::::::::::::::::::::::::	034
	Mosquitoes.	© © 4 G C 4 C − − : © :	310
	Leprosy.	が44で014ので000 : w	4028
	Hook Worm.	7 9 8 70 9 70 8 6 1 4 8 74 4	2-4(
	Cholera.	0147010800H : : H2	352
	Domestic Hygiene.	D C 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 26
	Personal Hygiene.		45
	Welfare.	w :4ww :wvaa : :	22
	Maternity & Child	<u> </u>	0
	Tuberculosis.		4 40
	Typhoid.	বিঅবঅসাবাসজন্ত	38
	Malaria.		1 2
	Saving the Race.		
	Chandi Bee.	:- : :∞ : : : : : : : : : : : : : : : :	10
	Small-pox Story of Jani Bee &	4000004040044	44
		2-010-0440740	54
	lectures.	202 850 950 1050 1050 1050 1050 1050 1050 105	23,254 44
at the	Total attendance	લેનેનેલેલેલેનેલેનેને	
	of Magic Lantern.	8488844888448 848884488844	278
the aid	No. of lectures with	64 64 64 64 64 64 64 64 64 64 64	
	of Cinema shows.	ಶಾಲುಬಡಿತು :4ರ : : :	31
the aid	No. of lectures with		
	vered.	23332533533 444437440747	300
-ilab sar	No. of out-door lecture		
Centres.			
			=
		ım 1	Total
		ane bpet bpet mbakka e Town i iram rranpe	H
		Triplicane Rayapettah Mirsahibpet Nungumbakkam Egmore Purusawakkam George Town Choolai Royapuram Washermanpet Muthialpet	
	0	Triplicane Rayapetta Mirsahibp Nungumb Egmore Purusawa George T Choolai Royapura Washerma Muthialpe	
		rrip ays irs un, un, un, un, hoo oy, '/as	
		FRENDRANER	

144 STATEMENT No. XII.

Centres.		Municipal Divisions.	Total No, of births from 1-1-'37 to 31-12-'37.	No. of Cases Conducted by Corporation Midwives.	Percentage to Total Births.
Royapuram	{	1 2 3	579 616 1465	263 265 563	45·4 43·0 38·4
Washermanpet	{	$\frac{4}{5}$	1316 1262	723 609	54 ·9 4 8·3
M uthialpet		6 7 8 9 10	381 774 306 666 379	178 368 115 245 148	46·7 47·5 37·6 36·8 39·1
George Town	:	11 12 13 14 15	746 293 1083 759 326 406	467 43 483 376 108 115	62·6 14·7 44·6 49·5 33·1 28·3
Perambure	{	17 18	1272 958	933 460	73·3 48·0
Choolai	{	19 23	1 4 14 881	787 386	55·7 43·8·
Purasawalkkam	{	20 21 22	838 832 550	529 4 4 0 9 5	63·1 52·9 17·3·
Egmore	{	24 25 26 27	550 851 914 876	139 • 259 318 41	25·3 30·4 3 4 ·8 4·7
Nungumbakkam	{	28 29	6 21 4 33	210 99	33·8 22·9
Triplicane	{	30 31 32 33 34	826 998 962 645 735	378 566 3 4 5 1 57 326	45·8 56·7 35·9 24·3 44·3
Mirsaibpet	{	. 35 39 40 part	1676 503 *	755 207 130	45·0 41·2 *
Royapettah		36 37 38 40 part	701 766 464 333	289 178 61 13	41·2 23·2 13·1 3·9

N. B.--*Cases included in 40th Division in Rayapettah.

